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THE JOURNAL

OF THE

Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

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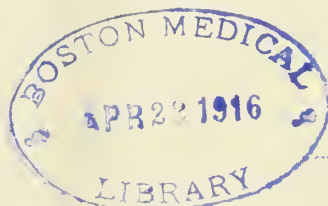
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E. J. GOODWIN, M.D., Editor

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Volume X

JULY, 1913

Number 1

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EDITOR

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PRESIDENT'S ADDRESS

R. M. FUNKHOUSER, M.D.
ST. LOUIS

That there is a sociologic fermentation abroad no one can deny and what the outcome will be no one can foresee, but as an optimist I feel in the end it must be for good.

One of the greatest dangers in the social upheaval is that men of psychopathic tendencies may occupy high places, men with defects due to a faulty early education, with unbalanced minds. The old saying that *mens sana in corpore sano* was never truer than it is to-day. More than ever, sane medical minds should have a voice in all that appertains to sanitation, hygiene, prophylaxis, eugenics and germane questions. The names of Galton and Mendel will be household words in the future; wherever and whenever the questions of sociology, of eugenics and of heredity will be studied.

It is not the intention now to discuss the difference of the influence between "nature" and "nurture" but it is an acknowledged fact that there is a tendency of bodily and mental and other natural gifts to perpetuate themselves in families.

The science which deals with those social agencies that influence mentally and physically the racial qualities of future generations is a science that should appeal to all peoples. This science is known as eugenics. There are two chief aims of eugenics: one to check the birth-rate of the unfit; the other the improvement of humanity by fostering the productivity of the fit by early marriages and the proper care of the offspring. It is well to bear in mind the difference between natural selection and eugenics; in the one there are excessive production and extensive extermination; in the other, fewer individuals are born, who can be properly looked after and are of the best inheritance.

Though there is not an unanimity of theories of heredity, it is the inherent and constitutional qualities which are of value. The great importance of the laws of Mendel is fully recognized, as also the need of more scientific study of the unit characteristics inherent in the parent cells of the human race. The quality of human beings should count and not quantity. Is it not wiser and better that prophylaxis precede than that wholesale destruction follow? The quality of the child depends on the elements inherent in the germ cells of the parents and on the environment of these germ cells before the union and also after.

The general knowledge of the laws of heredity should be more largely disseminated and marriage should primarily depend on the desire to produce "worthy" offspring with the best qualities. The youths of both sexes should be taught in a proper manner the facts regarding the sex functions, the sacredness of parenthood and the importance of the right selection of the parent in marriage with a view to the production of children of desirable qualities, bodily and mentally. It can be very readily appreciated that any social agency that affects the stock is of prime, paramount importance, especially if it be of a malignant nature and its effects hideous.

There is no more intricate, closer relationship than that between social diseases and eugenics; between cause and effect; none in which the effects are more frightful and abhorrent.

The social or venereal diseases are world diseases just as are Bright's, cancer and tuberculosis, and they have ever been present from the earliest times. Their importance to public health and conservation of humanity cannot be overestimated nor too greatly emphasized. They are social evils and are secret diseases. They have a powerful influence in the consummation of race degeneracy and race extinction. In all the civilized countries an unusual effort is being made to enlighten the people of their presence and direful effect. Though there may be difficulty in openly discussing the question, there is

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting, held at St. Louis, May 13-15, 1913.

even much greater danger in keeping silence. The time has come for us to unite in eradicating from our midst a scourge which brings in its train such terrible after effect.

The public has begun to realize the great and crying need of making hereculean efforts to halt their devastating, blighting progress. Truly, they have been likened to "the worm that dieth not and the fire that is never quenched."

How can this be accomplished? Surely not by any one factor; not by the medical profession alone, but by the combined cooperation of the people with the medical profession. This cooperation has accomplished wonders in affecting the spread and control of tuberculosis and as much and more ought to be accomplished in checking or controlling the spread of social diseases. I, for one, believe that repeated public, open, consideration and agitation of the subject should be made; at least let not the opprobrium of ignorance and inactivity be placed at the door of the profession. It behooves us to bestir ourselves in an endeavor to control the spread of the various forms of these diseases. It is bad policy and mock modesty to place in the background the consideration of this portentous problem. We must openly admit and discuss this, the most vital burning question of the hour. To quote John Stuart Mill: "The diseases of society can no more be checked or healed than those of the body without publicly speaking of them."

It is difficult to procure accurate statistics regarding these deplorable diseases, though it is well known to the average physician to what extent they prevail. Two of these diseases will be considered in a limited manner. It has been estimated by some that 60 per cent. of all males contract gonorrhea at some time of their lives. Mind you, this is considered the lowest estimate. In larger cities the proportion is as high as 90 per cent. In the United States Army an average of 10 per cent. of the men in the hospital each year is on account of gonorrhea; in the Philippines 20 per cent.

About 800,000 or more males reach maturity yearly and about 73 to 75 per cent. of this number, in the neighborhood of 600,000 young males, will sooner or later become infected with venereal disease. What an appalling, what a terrible, what a monstrous condition to contemplate! Are we to remain idle and make no effort to remedy this condition? For it is a condition and not a theory, and fancy pales before facts.

Let us contrast the effect of tuberculosis. In this state 5,500 yearly die, or one in every ten. Although venereal diseases do not so commonly kill as tuberculosis, they leave the body enervated and weak, in many cases a derelict, a prey to many ills and maladies, which it is not opportune here to relate. Heredity unquestionably plays a most far-reaching effect on the physical economy

of every individual. Every child cannot be left with money, but it is the prime duty of every parent to see to it that the offspring be equipped with a healthy mind and body in the competition of life. No one doubts, indeed it goes without saying, that good health and a healthy body are a priceless legacy to a child. Too often through ignorance and improper training and environment, the future parent has imperiled the very health of the future offspring.

Religion alone will not regenerate the human race. There must be something physical to build on. Morals are not inherited but the physical and intellectual body is, on which is constructed the moral character of the individual. This can be accomplished by proper training and environment of a healthy and wholesome body, with the best of antenatal influences; for it is indeed character that counts. Think of nearly 80 per cent. of the surgical treatment of women being due to venereal infection, and 70 per cent. of all diseases treated by gynecologists are of venereal origin. Gonorrhea is not an unfrequent predisposing cause of tuberculosis of certain parts, and of other diseases. Over one-half of the women infected with gonorrheal virus are barren and many never see or feel a well day after infection. In the United States the percentage seems to be larger than in England, France or Germany. One attack does not immunize the victim to another; he or she may suffer from any number of attacks. This is frightful but the extent of gonorrhea in the female is most alarming. It is considered that of every 1,000 men married in New York, 800 have had gonorrhea, from the great majority of whom their wives have become infected. The conclusion is that over one-half as many women suffer from this disease.

In the public hospitals of the leading cities of Europe where it is customary to examine all women who go there for confinement, it is estimated from 20 to 25 per cent. have gonorrhea. The disease is more insidious in the women than in the men, consequently more serious and more difficult to treat; nor is it confined to adult males and females. It infects the eyes of the new-born child. It is estimated that there are more than 30,000 blind people in Germany due to gonorrhea. From 25,000 to 50,000 are found in the United States. From 70 to 80 per cent. of ophthalmia in the new-born or in babies, and over 20 to 30 per cent. of all blindness is due to gonorrheal infection.

It is not uncommon for epidemics to occur in families which may be traced to an infected father or mother. For instance, it may be contracted by children sleeping in the same bed with the afflicted parent. The virus or poison of gonorrhea is peculiarly virulent, virile and infective. In Posen, Germany, 236 little girls from 6 to 14 years were infected with gonorrhea, which was traced to the use of the public bath.

Syphilis, another very prevalent venereal disease, infects one-fourth to one-fifth as many men as gonorrhea, according to the Army record. In Berlin 12 per cent. of males have been estimated as syphilitic; in Paris from 13 to 16 per cent. In other words, more males have syphilis in Paris than have tuberculosis. According to many authorities, in general there are more families with luetic taint than with tuberculosis. Indeed, four times as many have gonorrhea as have tuberculosis.

From the above that has been said of the two chief venereal diseases, some idea can be formed of the prevalence of the black plague, as venereal diseases have been styled, as compared with that of the white plague, otherwise known as tuberculosis. Indeed, the morbidity of venereal diseases is tremendously greater than that of the white plague. It is, however, difficult to estimate because it is not unusual to enumerate the cause of death in these cases under other names, not forgetting that stillbirths and miscarriages are largely due to these diseases. The germ of gonorrhea must be classed along with those of syphilis, tuberculosis and leprosy as it leads to systemic infection. "As a result of modern investigation it may be positively affirmed that gonococci is susceptible of being taken up by the blood-vessels and lymphatics and may infect almost every organ in the body. According to some authorities, it may lie dormant in the body for years, in some cases even for a lifetime. Once infected, therefore, a man can never be sure that he is free from the germ; above all, the chances appear to be one in two that if he marries he will infect his wife which will be a much more serious matter. In every community where gonorrhea exists, thousands of women are made invalids for life and many die from gonorrhea. It spreads, and family epidemics have not been uncommon.

Fournier and others declare that gonorrhea causes 50 per cent. of sterile marriages (due chiefly to inflammation of the female genital tract). In France, out of ten millions of families, two millions are childless and, if Fournier is correct, one million families are deprived of children through gonorrhea. Indeed, gonorrhea is the pest of our age (Janet).

The sterility of males is 17 to 25 per cent. In 75 per cent. of all cases of sterility the fault lies with the husband. Ascher places it at from 71 to 72 per cent.

Let us now turn to syphilis, the sequelae of which have never been so fully understood as to-day. They are almost countless. Without going into the symptoms in detail it may be said that it causes 20 per cent. of all cases of insanity and a great number of paretics; 97 to 100 per cent. of all cases of locomotor ataxia is due to syphilis. Cerebral syphilis which forms the bulk of apoplexies and hemiplegias occur

under 45 years of age. Thus it will be seen the economic loss to society is enormous. In 1897 the number of days of service lost in the British army and navy by venereal diseases was, for primary syphilis, 96,339; for secondary syphilis, 49,768; for gonorrhea, 77,054.

Forty per cent. of all miscarriages are due to syphilis. In 60 per cent. of infected cases the child dies before or at birth. The remaining 40 per cent. live to grow up to varying ages as heredosyphilitics. Fournier, Hutchinson and Morrow affirm that certain of these hereditary, morbid states formerly referred to, as scrofula and tuberculosis, are really the expression of the syphilitic diathesis. In certain rural localities of Russia where syphilis constitutes an endemic disease, 75 per cent. is transmitted in family life and that the marriage of heredosyphilitics is one of the principal causes of degeneration of the population. It has a peculiar effect on certain races as is seen in Hawaii where the native people have been reduced one-fourth of their number during the past century. No doubt it has proved a leading factor in the decline and fall of ancient Rome, of the disintegration of powerful dynasties and the extinction of great and vast empires of the past and even present.

The people of Korea have felt the blighting effect of these diseases as has Portugal and other nations.

I feel you will agree with me when we consider the ubiquity of venereal diseases and their ruinous effects on both sexes of all ages and their corrupting influence on the propagation of the human race, there is no more important subject to society than the prevention of their spread, which no doubt will pave the way for the fall of present nations as they have been the chief factors in the ruin and effacement of many nations in the course of time. This is your business, it is mine; it is the business of the community to act and to act at once. How many innocent people have suffered; how many pure and innocent women and children have been their victims? It is the paramount issue of the hour. The most potent means of preventing or diminishing venereal diseases will be the spread of exact information as to their disastrous results, immediate and remote, on humanity.

The conditions of society, past and present, have been favorable to the presence and spread of this horrible infection. The double standard of morality in the main is to blame. Man must be uplifted to the woman's higher standard. If continence is demanded of the woman so should it be of the man. Continence is compatible with the health of both.

By many the action of the recent legislature of Indiana, compelling parties contemplating matrimony to submit to an examination has been considered too radical and drastic. It is, however, an indication that the people are awaken-

ing to the deadly peril lurking in their midst. Every woman contemplating matrimony should demand of her affianced a clean bill of health. It is high time for the women to arouse themselves to the realization of the great danger threatening themselves and their offspring. Whether legislation will cure this evil is a question, but we feel assured, home training and education along lines which will point out to the parents and children the prevalence of this menacing condition of society, will produce a more healthy moral tone. If parents fail, who is more fit to undertake this task and duty than the state? Ignorance and the failure to realize the gravity of the situation are to blame for the lethargy so apparent concerning sexual matters. There is need of accurate knowledge and the true facts should be stated and not covered up nor concealed. St. Louis and Missouri should consider the plan being worked out in New York where cases are recorded without names of individuals and statistics are compiled.

4354 Olive Street.

ORIGINAL ARTICLES

THE MAKING OF A SURGEON

Oration on Surgery*

F. G. NIFONG, M.D.

COLUMBIA, MO.

At the recent meeting of the Congress of Clinical Surgeons of North America a resolution was introduced, enthusiastically received and unanimously adopted, and a distinguished committee appointed to investigate and report as to the practicability of "standardizing" surgery. This resolution looked to the formation:

First. Of a minimum standard of requirements that a graduate in medicine should possess to be allowed to perform surgical operations independently.

Second. The listing of names of men who have the authorized requirements.

Third. Legalizing a distinct degree to supplement the medical degree.

Fourth. To seek cooperation of the medical schools in conferring this degree.

Fifth. To authorize and popularize the supplementary title.

The author of this resolution, so favorably received, stated his belief that "the time is ripe for concerted action on the part of thinking surgeons of this continent to insist that the surgeon of the future shall be not only thoroughly educated in the science of medicine, but he shall

have a thorough training in the technic of surgery under the direction of a practical surgeon before he is legally or morally allowed to operate on the public. . . . This would protect the unsuspecting patients who have no way of discriminating between the trained surgeon and the tyro. It will also protect the would-be surgeon against his own inexperience and will protect and put a premium where it belongs on the conscientiously trained surgeon."

This is a very significant and far-reaching action on the part of a great and representative body of surgeons, aggressive and scientific men representing most that is best in the practice of surgery to-day. It points clearly to discontent and unrest. A proposition so revolutionary could spring only from grave dissatisfaction with existing conditions. Many abuses are found in the practice of surgery. That something is lacking much to be desired, is evidenced by this spirit of unrest displayed by our leading surgeons.

Let us deny in the beginning any spirit of pessimism, but on the contrary declare a cheerful hopefulness justified by these revolutionary tendencies. We could address you much more happily in recounting the marvelous triumphs of modern surgery. But it is the part of wisdom that we examine ourselves and strive to correct our faults and deficiencies.

Surgery is truly a modern science and possibly it is assuming too much dignity and importance. Let not surgery be arrogant and egotistical because of signal achievements. The next two or three decades may see medicine progress still more dramatically. And are not medicine and surgery one and inseparable? There can be no surgery without medicine. Let us not forget the low beginning of surgery as exemplified by the despised barber-surgeon. How little in surgery could be done 200 years ago; no more could be done than was done 2,000 years ago; it was not a science, not an art. About two hundred years ago the medical man began to assume his duties as surgeon, as had been done in ancient times. He took apprentices and taught them the art, as it then was practiced, as a small adjunct to the practice of medicine. We have in our own history of medicine in the United States and colonies a vivid picture of the progress of the art. We see in the beginning the medical department of the College of Philadelphia, in 1765, the medical department of King's College, in 1767, and after the war the medical department of Harvard College, in 1782, as the pioneers in the instruction of the art of surgery. At that time it was not of enough importance to be dignified by a special professorship, but was taught as an adjunct to anatomy. However, it was of growing importance and was being practiced by men of character and refinement and soon became a distinct art.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913.

The history of American surgery in its rapid evolution is extremely interesting. Think of its worth 150 years ago and its present achievements. What marvelous progress has been made and oftentimes how dramatic. Within the memory of some of our older surgeons have come the most revolutionary changes. Long and Morton with anesthesia, and Pasteur and Lister with antisepsis. It is hard for the mind to comprehend and difficult to appreciate the difference between then and now. So with this rapid and wonderful progress have come many necessary changes in acquiring the requisite knowledge to become a surgeon.

The old method of apprenticeship and the "reading of medicine and surgery" under a preceptor was good when supplemented by teaching in the established schools. And let us not decry and malign the old schools. "Proprietary" we may call them, but in times past they fulfilled their functions well. They are of the old régime but you, my progressive, were no doubt inspired with lofty ideals given you by a professor doctor of the old school who taught in them. But this wonderful progress in medicine and surgery makes the old methods impossible. Many changes are necessary in acquiring the requisite knowledge to become a surgeon. The fundamental requirements, of course, are still imperative but many refinements must be added. It is not enough to have been an apprentice and a graduate in medicine to be a good doctor or a good surgeon. Our schools are not giving to the world a properly equipped physician and surgeon, however much improved over the recent past. They have given and are still giving us a horde of unprepared and inefficient graduates. Note, therefore, the resolution which is our text, indicating discontent and protesting against existing conditions. Are there too many unprepared and inefficient surgeons? Yes. Too many surgeons without the necessary training and experience, without the qualities of heart and mind, and without the high ideals necessary.

There is more than one reason for our deficiencies but it must be clear to us all that faulty education and low ideals are the chief causes of the many abuses from which we suffer. Why should our profession, most honorable, be cursed with individuals with such low, degraded ideas of the rights of man as to make a commercial asset of his infirmities? How incompatible are modern commercial methods with the most altruistic of professions. How hideous is this lowest form of "graft." We have presumptive evidences of such practices and have we not in this state, as a profession, recently suffered the shame and ignominy of proposed legislation for making such an act a criminal offense? It is time for unrest and there should be discontent. Will we be content when, for instance, a surgeon who characterizes himself as an "Ishmaelite" with his

"gang" of brigands shamelessly advertises division of fees? More decent, however, is this Ishmaelite with his moral obliquity, seeing no wrong, than is the Jacobite who knows the wrong and does the thing surreptitiously. Is it the intense competition and struggle for existence among the unfit that warps men's judgment and moral nature to this extent? What a debasing and degrading thing it is.

Again the ease with which the practice of asepsis is acquired has been the cause of the existence of numerous so-called surgeons. The merest novice with this much knowledge is able to invade many sacred regions of the human body. As a consequence, ill-advised and improper operations are often performed. A short visit to some of our great clinics fires the ambition of the aspiring surgeon and forthwith he becomes a "monkey surgeon" and nothing more.

Too many confuse the surgeon with the mechanician. Mere operating is not surgery. Such a low ideal fits only the ancient barber-surgeon. We should realize that the operative part of surgery is really the least important part. A broad knowledge of general medicine and great diagnostic skill are much more essential. A human sympathy and conscientious devotion to the welfare of our patients should always be ours. No mercenary motive should ever enter into consideration. We suffer many abuses because so many are not only improperly educated and afflicted with morbid egotism but are morally unfit. There is no profession in which is needed greater strength of character, none calling for keener human sympathy, and none demanding stricter conscientiousness than that of surgeon. Not enough account is taken in our educational system of the moral training and heredity of the novice in medicine and surgery. The close family relationship and the absolute trust and confidence necessarily reposed in the surgeon demand that he have no moral astigmatism and that he be properly educated and prepared with ample experience. A composite individual he must be comprising the trinity of judge, jury and executive in one.

Let us also accent the words *ample experience*. Scarcely less reprehensible than the divider of fees is the one who eagerly undertakes operations in which he has had no experience as assistant and oftentimes fails because of this lack of experience. A proper moral standard would make him realize his grave responsibilities and prevent this serious abuse. This is another cause of our discontent as indicated by the resolution which is our text. The laity is not able to discriminate between the trained and the untrained surgeon, but that difference is often the difference between life and death.

It is so frequent for us nowadays to have surgeons made simply by announcement, and so it is with all our specialties; a limited experience

and a predilection for the specialty being the only stock in trade. A wise dictum of an old school specialist is well remembered: "No specialty should be entered until one has had experience in general practice for ten years." Most important of all should be our gradual development into surgeon. The practice of real surgery becomes a habit and comes by large and arduous experience. As we have gotten it most correctly we hark back to old methods of apprenticeship and become an assistant to an older surgeon of large experience. Years of such work make the proper surgeon if he have the other necessary requisites, moral, educational and physical combined with energy, enthusiasm and lofty ideals. But changing conditions in requirements and education do not permit them to be made always in the old tried way. A readjustment we must have and new methods of training. Our surgical congress seeks to regulate the education and discriminate between the fit and the unfit, the good and the bad.

Our first concern must be with our educational system. A proper digest of the Flexner report to the Carnegie Foundation for Teaching Advancement will not fail to indicate to us the many faults in our medical schools as well as wherein we are progressing.

There are still in existence so many proprietary schools turning out the unfit; but we are greatly encouraged by our schools of constantly increasing efficiency. We are plainly in the evolutionary stage and before long the law of survival of fittest must obtain. Side by side we now have schools of both the highest and lowest standards, and paralleled by individuals in the profession of the highest and lowest capabilities. It is this anomalous condition in our evolutionary period which we wish speedily to be changed for the better.

Popular education and more general knowledge of the value of our profession to the state in promoting the general welfare and happiness of all is making for better standards. The state should demand the best of a profession which is so essential to the health and happiness of its individuals and is of such vital importance as an economic factor. And while the state has a right to demand the best possible on the part of our profession, we likewise have a right to demand of the state that she furnish us with the best possible facilities for equipping ourselves. Yes, we have right to demand that the education of the physician and the surgeon be truly the business of the state. No other profession contributes more and some have given much less to the general welfare. The education of engineers, however important, for the physical welfare of the state, does not compare with the higher welfare induced by promoting the health of the community. Our making of lawyers and teachers and all other professions can contribute no more,

and some much less, than the profession of medicine and surgery.

We as a people are most easily reached by arguments demonstrating the cost of a thing. Unfortunately we have had too low a value on human life. This is being revised upward. We will come to the time when our state will value human life more than hog life, when more money will be expended to prevent typhoid fever than hog cholera. Our propaganda for the conservation of natural resources is very important, but infinitely more important is the higher motive of conserving humanity and keeping the human race at its highest standard of efficiency. It is the business and the duty of the state to educate our doctors to the highest possible degree to equip them for this most important of all conservation efforts.

So let us have in our state universities schools of medicine of sufficiently high standard to meet all the requirements that the state should make. We are beginning to have clearer ideas of the functions of our state universities and their great value to the people. They are not schools for training a small fraction of the population to be superior to others, but a crowning glory to a great system of education for the whole state and through its various schools disseminating knowledge to all; investigation, research and the resultant knowledge is distributed through the state. The schools of teaching law, agriculture and all others are playing their parts. Can medicine and surgery play no part? Have we made no discoveries for the good of mankind? Are we not, as a school, working as diligently in research as any other? Can other professions give more to mankind than we have given? Anesthesia and antiseptics alone will answer without mentioning numerous recent discoveries. We demand education and we have equal right to so demand.

By insisting that the education of doctors be the business of the state we do not mean to criticize or discourage private or endowed institutions if they have the facilities to meet high state requirements. We only mean to say that it is the business of the state to require properly educated surgeons and it is the business of the state to see they are supplied by furnishing the proper education. And this education must be on a true university basis comporting with the broader view of the functions of a university. The school must have not only its biologic and other great laboratories but must have its great university hospital, a teaching hospital, the greatest and most essential of laboratories in medical teaching. This university must have its men of science—paid scientists—must have men of ideals and honor, capable of inculcating ethical and professional ideals, must have men who have the broader view and take their teaching responsibilities very seriously; men like Dean

Lyon who feels it so keenly that he says, "When I hear that one of our graduates has undertaken a surgical operation for which he was not prepared, I seem almost to have stuck a dirty finger in that patient's wound; when I hear of fee-splitting I feel like a thief; when I hear of an avoidable death I have some qualms as a murderer."

Now, may not something like this plan which we propose, meet the approval of this congress? Let the state demand for entrance to all professional schools a broad academic education and not the least stringent should be the requirements for the medical school. Let the university educate the physician as it does the lawyer, teacher, engineer or any other profession. Let the university first make its bachelor in medicine as it does in science and art. When by original work, hospital service and practical experience, he earns his required credits, he is to be made a doctor of medicine and receives his doctor's degree. Again by a plan of hospital internship and service as assistant to older surgeons for a definite length of time the doctor of medicine may receive his degree of doctor of surgery and be allowed to practice major surgery independently. If the state should supply such education it could consistently demand equal equipment from other state or private schools. Such a plan of university education would make the title of doctor, now so common and of so little meaning, a title of honor and distinction, a true meaning for the word.

With such facilities for the making of a surgeon it might be possible to approach our ideal more often. With an untainted heredity both physical and mental, and born into an environment so auspicious we would start our embryo surgeon. His physical and mental training should be the best our country affords. But the most important requisite in our foundation is the moral training, for without the strictest morality and the most sensitive conscientiousness he will fall far short of our ideal. His nature should contain no sordid, selfish streak. A broad human sympathy should be his. On this stable foundation let him build and build. An education liberal and profound he should have, if possible, for no profession should be more learned and none more worthy of the title of doctor. Let him be truly educated in science and art, and to this substantial structure let there be added his professional knowledge obtained in universities of standing and character where is furnished the true and efficient training for so important a profession. Let him constantly progress for he should never reach a place of contentment; let him become a bachelor of medicine; let him by further effort and service become a doctor of medicine; let him become by successful service and study a doctor of surgery, always striving but never reaching the lofty ideal that should

ever be his. And while striving thus to attain his ideal let him always be a man; not only a man of thought and science but a man of sensitive deep feeling and love for his fellows; a man of sternest fiber and keenest human sympathy; a man of moral force and an exponent of the best in his community, confident and sure of his own knowledge, but ever alert for truth from any source. A cultured and versatile individual. a composite of gentleness and strength, learning, and simplicity, self-esteem and humility, fortitude and sympathy, a good, true man, the best an accomplished eulogist and word painter might be able to picture to you.

THE QUESTION OF THE PREVENTION OF INSANITY, AND OUR STATE HOSPITALS AND HOW THEY MAY BE IMPROVED *

M. P. OVERHOLSER, M.D.

HARRISONVILLE, MO.

In the introduction of the subject matter of this paper, I wish to say that the remedy for many if not of all social and state evils lies beyond an educated public opinion. It is true that in the advancement of progressive and reformatory measures or methods, education of the public mind is the first essential step; but education is only a process; the dynamics or power to act and to progress in social and state reforms lies within the people.

Humanitarian impulses may be awakened and directed by the educational process but it is the educated public which must exert the force to right our wrongs. As a step toward this end we hold that it is the duty of every social worker and every worker in state reforms to lend himself or herself and the particular work they are engaged in, to a campaign of publicity, "to the end that the people may know what they are doing, how they are doing it, and the reasons for it being done, that they may lend their aid in the doing." Otherwise the work of social service and of state reforms will continue to remain too aristocratic in its efforts and too limited in its results; whereas it should be operated on a truly democratic plan; not the work of a few but the work of the people as a whole.

That Missouri has not kept abreast with many of its sister states in the management of the great problems of insanity and in the more modern and more scientific methods of the institutional care of its dependant wards during the past decade, is a fact which must be acknowledged by all those who are familiar with the great progress which has been made in a number of other states in the care of the insane.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting, held at St. Louis, May 13-15, 1913.

Whether or not the responsibility of this failure of Missouri to keep pace with many of its sister states in the management of its insane can be justly placed on the shoulders of the officers and managers of these institutions, or whether the fault has been most largely with the public, or whether the responsibility must be placed elsewhere, is an important question for discussion; and the sooner this question is solved the more quickly can the remedy be applied and the more speedily will the great possibilities for more efficient service and more scientific treatment of these patients be realized.

In any system of state institutions in this country, the care of the insane is the most important item because in most states there are more inmates in the hospitals for the insane than in all the other state institutions combined. In Missouri, however, the number of insane in the state hospitals is about equal to the total number in the nine other eleemosynary state institutions, including the Missouri School for the Deaf, School for the Blind, Federal Soldiers' Home, Colony for the Feeble-Minded and Epileptic, State Sanatorium, Confederate Soldiers' Home, State Industrial School for Girls, Missouri Training School for Boys and the State Penitentiary. It is also the most important item for the reason that insanity inflicts greater disabilities on the sufferers than any other ailment, and further because the proper caring for the insane is a great responsibility and duty of the state.

We have in Missouri four state hospitals for the insane, hospitals Nos. 1, 2, 3 and 4 located respectively at Fulton, St. Joseph, Nevada and Farmington. In these four institutions the average daily population of inmates during the past year was 4,231. Of this number 2,295 were males and 1,936 were females. The amount expended for the support of these patients during the past two years was \$1,645,950. In addition to this amount there was expended for officers' salaries, new buildings and improvements, \$345,000, making a total of nearly \$2,000,000. This, of course, does not include the cost of the maintenance of the insane which are kept in the county homes and in the private sanatoriums throughout the state and in the hospital for the insane in the city of St. Louis which has nearly two thousand patients.

The number of those suffering from mental disorders is gradually increasing each year and in much greater proportion than our population. Statistics show that during the last fifty years the population of the United States increased 350 per cent., while the number of insane increased 950 per cent. In institutions of the United States there are more than 145,000 individuals in well-advanced stages of alienation, and, in addition, 120,000 feeble-minded persons. The present cost to the country of only partially providing for the maintenance of this great

army of incapables is well over fifty millions of dollars a year. If to this we add the economic loss to our states in dollars and cents by this incapacitating disease of the citizens of our nation, it would reach an enormous sum, unquestionably hundreds of millions of dollars annually; and the most serious part of this matter is, that the weight of this burden keeps steadily increasing each year. And this is only the economic side of the question.

In this paper we will not have time to speak of the work that is being done in some states for the prevention of insanity, the study of the physical and social causes of insanity, the after care of the insane and other problems which confront us from a humanitarian as well as an economic standpoint in relation to this disease. However, permit me to say at this time that, so long as the community feels, so long as we as individuals feel, as many of us have felt, perhaps, in regard to insanity in the past, that nothing can be done about it, so long will our people live contentedly in the midst of the enormous and gradually increasing number of the insane, with a feeling of practically no discomfort and no sense of obligation, except giving comfortable care to those who become insane and to cure those who may be curable. We are to-day in very much the same position in regard to insanity as we were some years ago in regard to tuberculosis. The public believed then that nothing could be done to check the ravages of that disease; it felt no sense of obligation for the prevention of tuberculosis and little for its cure, for it was firmly believed by the people that it was neither a preventable nor a curable disease. But the moment they were led to realize that something could be done to prevent it, that moment they began to feel that a duty and obligation of the highest sort rested on them; and they have gone to work to do whatever they can to stamp out this scourge of humanity.

National and state committees on mental hygiene are pointing out to us the possibilities for the prevention of insanity, but the people still believe, and perhaps many of the medical profession may believe, that an undertaking for the prevention of this disease would be a useless task. So long as such opinions are permitted to prevail we must all admit that just so long will no steps be taken to educate the people on some of the common causes of insanity, and just so long will the public remain contented and unconcerned, with no sense of obligation in regard to this important part of preventive medicine.

We are organizing campaigns for educating the people in the principles of hygiene for the protection and preservation of their bodies from disease, which is a most worthy undertaking and which is bringing good results every day; but what special work or what special progress have

we made in our state in teaching the public the laws of mental hygiene for the production, development, protection and preservation of healthy, normal brains and sound minds of our citizens? Is not the conservation of the mental health and strength of the citizens of the state of as great importance as the conservation of their bodily health? For a state to attain the highest possible development, should it not seek, not only to maintain but to increase the mental as well as the physical vigor of its people? Would you say then that we are too optimistic if we insist that it is the duty of the state to protect and preserve the mentality of its citizens? Or has the time not yet arrived in the history of our state when the people should know some of the common causes of insanity that they may begin the work of the prevention of this disease? If we should agree that the education of the public in the matter of the causes and prevention of insanity is a part of the field of preventive medicine, then we might ask again whose duty is it to begin this undertaking? Shall the medical profession of Missouri wait until this obligation is realized by some non-medical, progressive, organized body of the state, or shall the Missouri State Medical Association soon begin to feel that a share of the weight of this responsibility is, perhaps, even now resting on it? Our association has standing committees for the study of cancer, for the study and prevention of tuberculosis, for the prevention of ophthalmia neonatorum (purulent sore eyes), trachoma and vaccination, but none for the study and prevention of such a severe affliction to the citizens of the state as insanity. A state which seeks to attain the highest possible efficiency in the care of its insane aspires to a most noble purpose and work for suffering humanity, but a state which goes further and seeks to prevent this sad affliction of its citizens manifests even a deeper interest and a greater concern for the welfare of its people.

However, we must pass this important subject at this time. To fulfill the wishes of the committee on the program we have been requested to present to you this evening some of the practical lessons we have learned in our experience in the management of the insane at State Hospital No. 3 at Nevada, Mo. I wish to say aside from the usual treatment which it has been the duty and custom of the state to give the patients of state hospitals—treatment which is based on the principles of general medicine which include medication, hydrotherapy, pleasant quarters, proper food and kind treatment—we desire to bring to your attention several methods of work in the management of the state hospital insane which we consider most essential and which we are fully convinced should be adopted in all the state hospitals of Missouri.

We will have time to speak only of a few of these methods. I will mention first the training school for nurses and attendants, and second the industrial, educational, occupational and diversional treatment of the chronic insane. I wish to speak first, however, of the treatment of the chronic insane by the last-named methods.

An extensive treatment of the insane of the state hospitals by occupation opens up a new field of work in the care and management of these patients in the state institutions of Missouri. Salvation by work has always been a more or less clearly accepted principle in American life, but it is only within recent years that this principle has been adopted in the treatment of the insane. From my experience at State Hospital No. 3, permit me to say that I am thoroughly convinced that this method of treatment, if properly applied in the state hospitals, will prove to be one of the most effective means of treating many cases of chronic insanity. Occupation it is true cannot restore that part of the mind which disease has destroyed, but in a very large percentage of cases the scraps of a wrecked and shattered mind may be stimulated and reeducated by the vivifying influence of occupation. Idleness of these patients leads to introspection, whereas occupation demands attention directed on outside matters. Besides the use of the hands means at least elementary activity of the mind. In addition, every idle patient taught to assume some duty, some responsibility, where he is required to use his hands and the remnants of his mental faculties, is given an opportunity to reeducate and redevelop the remaining impaired powers of his mind. In addition to teaching these patients to realize that they are given a position in hospital activity, be it ever so small, if nothing more than stringing beads or winding yarn, they are inspired with some feelings of importance and usefulness and in a short time learn to respect and love their work. Any treatment which has a tendency to arouse the normal feelings of a human mind in the indifferent and dormant minds of the chronic insane cannot fail to have a therapeutic and beneficial effect on the impaired mental condition. This cannot be accomplished by idleness. In fact, indolence of many of these patients contributes to their mental impairment and has undoubtedly made the burden of the state heavier and of longer duration than it would have been under the stimulating and educating effects of occupation. I have also found in my experience that many insane patients whose hands and minds are occupied at some pleasant and agreeable task during the day are far easier to control, are less untidy, less destructive, more contented, brighter, more cheerful, more interested in their surroundings, develop a more normal appetite and sleep more quietly at night. The results of the occupation treatment

show that even in comparatively low grades of demented patients there remains a residuum of mental capacity which can be made useful by training to a degree that is frequently not suspected. At State Hospital No. 3 this part of the treatment of insane patients has been elaborated on considerably during the last two years. In the new industrial building men patients are taught to manufacture floor brooms, whisk brooms, toy brooms, scrubbing brushes, wall brushes, floor brushes, hand brushes, clothes brushes, mattresses, shoes, moccasins and a number of other articles. The women patients on another floor of this building make overalls, men's shirts, ladies' dresses, bonnets and other articles of wear, cheap cotton gloves, carpets, rugs, hose, quilts, ward supplies and numerous other supplies. In March, 1912, a little over a year ago, there was installed another department called the art or occupation department for women patients, under the management of one lady instructor who teaches the patients to make various styles of baskets, porch pillows, porch mats and work bags of reed and raffia; make various patterns of bobbin lace, weave Navajo rugs and other rugs, jute pillows, Navajo pillows and linen runners on small hand looms; to do cross-stitch embroidery, French embroidery, punch embroidery, drawn and hem-stitch work, to make artificial flowers of various materials, and small articles of pierced brass, to crochet bedspreads and to make other articles too numerous to mention, to which can be added from time to time new and novel diversions in the way of occupation.

The interest taken by the patients in this work is quite remarkable and the change which can be wrought in their attitude, disposition and general demeanor can only be realized and appreciated by those who can see them before and after they have received the benefits of the occupational treatment. In the industrial and occupational treatment of the insane we consider the therapeutic value to the patient, first; the educational value to the patient, second; and the economic value to the state, third.

Next to this treatment in the management of the insane comes the purely diversional treatment. Aside from the usual and regular dances and picture shows each week for the patients, music, chapel service, walks and outings in the groves and parks, baseball and band concerts, a number of other diversions have been added, the most popular of which are tea parties and card parties. Tea parties are held every two weeks in the occupation room which is tastefully decorated with flowers and various ornaments made by the patients, and to which are invited, by turns, a certain number of women patients for each party. Here fifty, sixty or seventy-five, or more patients from various wards will meet each other, dressed in their best gowns, where

they listen to music, or perhaps are entertained by some special attraction for the occasion; and while some play games others gather together in little groups and converse with each other; some busy themselves at crocheting; some at needle work and others look on, and before departing all partake of the refreshments furnished for the occasion. If you were to step in and visit them some Saturday afternoon, you would find a happy crowd, and you would wonder that many of them were patients at a state hospital; yet they are all insane and a number of them quite violently insane at times, yet many of them capable of appreciating as fully as you and I pleasures and enjoyments of this kind. Card parties are held in the chapel every thirty days, in the evening, to which men and women patients are invited. The chapel is arranged for the occasion, largely by the patients, with card tables and chairs around which the patients gather and play various games with each other, or with the attendants, nurses, employees and officers. The games played are euchre, high-five, pitch, flinch, old maid, dominoes, checkers, jack straws and others. To this social enjoyment and pleasure for the patients is added music by the orchestra, and later refreshments, consisting of sandwiches, cake, coffee and chocolate. It is needless to say that the interest in this diversion is marked, and that it has become one of the most popular of all the diversions with many of the patients. Extensive treatment of mental cases by diversions, various industries, occupations and amusements is yet an undeveloped treatment in our state hospital, but from my experience in a limited way and with the results thus far obtained I am led to believe that in time it will prove to be the most powerful therapeutic agent we can find in the treatment of many cases of chronic insanity. The last biennial report shows 41 per cent. of recoveries of newly admitted cases under this treatment, compared with 27 per cent. of recoveries as shown by the report of two years previous under the usual treatment given in our state hospitals.

To carry out this line of treatment successfully it is absolutely necessary to establish in the state hospitals a training school for nurses and attendants. Work of the kind can only be done successfully by help which is properly trained in these new methods of the management of the insane. The training schools should have a woman superintendent who has had years of experience in state hospital work and who is thoroughly competent to teach and discipline nurses and attendants in the modern methods of caring for the insane. My experience has fully convinced me that the most progressive movement and the most humanitarian provision which can be made by our state at this time in seeking to render the most efficient service and most scientific treatment for the insane inmates of

our state institutions is the establishment of an up-to-date training school in each of the state hospitals in Missouri. The advancement of our state hospitals to the highest plane of usefulness will be a hopeless task without the training-school work. A school for the training of nurses and attendants was established at State Hospital No. 3 last year, with a thoroughly competent superintendent of nurses, Miss Helen C. Sinclair, formerly of Newbury, Mich., who has done most excellent work in this new but most important undertaking in Missouri. A training school was also established at State Hospital No. 1, at Fulton, Mo., during the past year, with Miss Bender in charge, who has done good work. I regret very much to be compelled to state to you, in parentheses I might add, that only within the last few days I was informed that on account of lack of proper moral support in this much needed and most worthy work in the interest of the patients of the state hospitals of Missouri, Miss Sinclair has been compelled to accept a position in another state where the necessity of this training is more fully realized and its great benefits properly appreciated. While this position will undoubtedly be filled by another, yet it is to be regretted that Missouri as a state continues to tolerate the conditions in the management of our state institutions which makes it so difficult to introduce and establish in our state hospitals these well-tried, modern methods for the most successful and most scientific care and treatment of the insane, and that some of the best material which can be obtained for the accomplishment of this work are really forced to leave our state to take up the work of the establishment of these methods in other states which are more progressive and more wide-awake to the most essential needs of their state institutions. These reforms in the state institutional management of the insane can only be accomplished through the power and will of the people. It is impossible for our state hospitals to progress as they should without the support and help of the public.

During the last session of the state legislature we succeeded in getting a special appropriation of \$2,400 for the financial support of the training school at State Hospital No. 3, which we are sorry to say was the only hospital of our state which asked for and which obtained an appropriation for this purpose.

Two important appropriations aside from the regular appropriations for our state hospitals which should be made by our legislature is one for the construction of buildings for the industrial and occupational treatment of the patients, and another for the establishment and maintenance of a modern training school for attend-

ants and nurses. Appropriations for both of these purposes would be a great economy to our state as the great therapeutic value to the patients by an extensive, well-conducted and systematic plan of the occupation treatment would hasten and increase the number of recoveries and thus diminish the burden on the state; besides the economy to the state in the manufacture of numerous useful and needful articles by the employment of the patients would soon become a valuable asset. In addition, the state will find that the modern, well-trained, well-disciplined nurses and attendants who are instructed in the principles of wise economy and who are taught to realize that one of their duties is to safeguard the property of the state, who are shown how to be more thoughtful, more considerate, more frugal, less wasteful and less extravagant with the supplies of the state, and whose interest, care, attention, attitude and work toward these patients can accomplish far more the betterment of the condition of the inmates of our state hospitals than the untrained attendant, would also tend greatly to lessen the financial burden of the state in the care of the insane. Such provisions as mentioned would not only be of great economy to the state but would also be the means of rendering far more humanitarian treatment to these patients and tend greatly to elevate the standard of efficiency in the state care of the insane in our hospitals in Missouri.

On account of the expiration of my time a consideration of other important measures for the improvement of our state hospitals must be left for those who follow me and those who take part in the discussion of this subject.

ENDOMETRITIS *

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ODESSA, MO.

Before we consider the subject of endometritis, we will review the histology of the endometrium. In the past the endometrium has been regarded as mucous membrane but at present the structure of this tissue is unsettled. It is found to have firm attachments to the muscular layers, lymphoid tissue and the secretions show it to be histologically a lymph-gland structure. Until this is more fully understood we will use the old term mucosa and the interglandular structure as connective tissue. There is no tissue about the body that undergoes so many changes as the uterine mucosa. In infancy, adolescence, maturity and the decline of life the endometrium differs so in its structure as to change greatly the pathologic process that may affect it. The

* Read before the Fourteenth District Medical Society, October 17, 1912.

mode of menstruation, of pregnancy and the changes following parturition produce abrupt changes in the endometrium. From puberty to the menopause the endometrium is well supplied with glands, blood-vessels, nerves and lymph-spaces. It is firm, about one-twenty-fourth of an inch in thickness and covered with ciliated columnar epithelium. The utricular glands are numerous and extend into and sometimes through the mucosa and are lined with ciliated epithelium. These glands are imbedded in a connective tissue stroma and are surrounded by lymph-spaces, blood-vessels and nerves. In a normal condition the secretion from the glands is clear, watery and alkaline. In normal conditions there is a small quantity. Congestion and inflammation increase the quantity and the flow has a milky appearance owing to the presence of the lymphoid elements. The lymphoid elements prevent the coagulation of the menstrual fluid. The lymph-spaces which pervade the mucosa and also are found in the muscularis empty into smaller branches of lymphatics and form a delicate network in the serosa which in turn empty their contents into larger vessels which pass out through the broad ligament. A thorough knowledge of the lymphatics, uterus and their distribution is necessary to recognize the more serious forms of infective endometritis. In the infantile state utricular glands are not formed; there is only minute indentation. They disappear in old age and are replaced by a cicatricial tissue and have neither blood-vessels, lymph-spaces nor nerves.

Endometritis.—Endometritis is an inflammation of the endometrium. As a separate and distinct disease endometritis seldom exists. In most cases this disease extends deeper and involves the deeper structures. The consistency of the tissues makes this imperative. The same nerves, blood-vessels and lymphatics which supply the rest of the organs supply the endometrium. They have the same nerve influence and are subject to the same vascular changes. These diseased products are distributed through the same system of lymphatics. Vasomotor influences affecting one part will affect the other. Congestion of one part is experienced in the other, and infection passing into the open mouth of the vessels or lymph-spaces of the endometrium must if it goes by the way of the blood- or lymph-channels traverse the other. Another cause for this general spread of infection is found in the relation of the mucosa to the muscularis. These tissues are in direct apposition, there is no intervening connective tissue to check the spread of the inflammation. Therefore, when inflammation starts in the endometrium it is carried into the muscularis and results in metritis.

Causes.—The inflammation of the endometrium with few exceptions is due to pathogenic

germs. In simple endometritis the germ is not supposed to take a part. This form is caused by traumatism, suppressed menstruation, retained secretions, malpositions and growth in or about the uterus. In this form we have no pus in the discharge. It is rarely acute, usually subacute or chronic. The cavity of the uterus in its healthy state has no germs and infection always comes from without. Infection is usually with dirty instruments or unclean fingers at the time of abortions or labor at full term, or may be transferred from the nozzle of a syringe.

Bacterial Endometritis.—The gonococcus of Neisser, the streptococcus and staphylococcus are the most prevalent infective germs. The gonococcus or specific endometritis is the more prevalent form of endometritis. The gonococcus seldom produces an acute inflammatory reaction in any location. The gonococcus is a surface germ and seldom burrows to the lymphatics. It seldom produces systemic poison, except by gaining access to the lining of the fallopian tubes. It is usually associated with other pathogenic germs, more often with the staphylococcus which adds to its inflammatory reaction and virulence.

Septic Endometritis is usually produced by the staphylococcus and streptococcus. The streptococcus is especially virulent and is found in the puerperal state. A large number of these cases are traceable to confinement; the enormous increase of blood-vessels and lymphatics afford great facilities for the distribution of germs. After confinement the lining of the uterus begins to disintegrate. There is oozing lymph in the cavity and clotted plugs in the exposed vessels. All this makes culture media for the multiplying of germs. This may be acute or chronic, mild or severe. This form of endometritis is the most violent and dangerous of uterine inflammation. The septic germs, especially the streptococcus, invades the deeper structures. They are carried to the tubes and ovaries by the lymphatics and may be carried into the pelvic cellular tissue causing cellulitis, to the peritoneum causing peritonitis, into the general circulation causing septicemia. In septic endometritis the mucosa is frequently ulcerative and necrotic and may be covered with a diphtheroid deposit. This condition usually occurs in patches, but may involve the entire surface. Occasionally the endometrium, or even a considerable portion of the muscular structure of the uterus, may slough off as a dissecting ulcerative process. Most cases of endometritis involve all the histological structures of the uterus. There are few that only involve the glandular elements. This is called glandular or parenchymatous endometritis. Another form which affects the connective tissue and interglandular substance is interstitial endometritis. In the glandular form the inflamed glands enlarge,

form tumor-like masses noticeable on the surface, often polypoid or pedunculated and fill the cavity which may project into the cervical canal and often into the vagina. In this form the secretions are abundant and the decomposition may be mistaken for malignancy. A fungoid condition of the endometrium is the growth of glandular and interstitial tissue. Menorrhagia and metrorrhagia are pronounced in this case.

Atrophic endometritis follows the hypertrophic endometritis. A continued swelling of the utricular glands and other tissues cause a wasting condition and are supplanted by cicatricial tissue. In this form the membranes are thin, exsanguinated and lack nerves and lymph-vessels.

Symptoms are pain, fever, increased secretions, menorrhagia, metrorrhagia and other reflex symptoms. The symptoms are marked by the degree of endometritis and other complications. Simple endometritis is seldom recognized. In endometritis the pain is dull aching and is located anterior, superior or posterior to the uterus, frequently extending to the thighs. The pain is severe and lancinating when it extends to the peritoneum. Menorrhagia and metrorrhagia are common. They are usually suppressed at the beginning of the disease, and in virulent septic endometritis may not reappear. The fever is ordinarily slight, but in the acute septic form may rise to 104 to 106 degrees. It may be preceded or accompanied by a chill. These chills may come daily or even oftener. The chief reflex phenomena are pain in the back and top of the head, irritation of bladder and rectum, nausea and general disturbance of the nervous system, as hysteria and neurasthenia. Patient is exhausted and weak and grows weaker when standing on her feet. Symptoms are aggravated during menstruation.

Examination.—The uterus is found to be large and tender, and there is increased pain on pressure. Cervix is enlarged, puffy, often is eroded and granulated. We find a thick, glairy, tenacious, discharge from the os, and a thin purulent, bloody discharge from the cavity. In the atrophic form we have an absence of the utricular glands, therefore we have no milk-like flow.

Diagnosis.—The evidence of endometritis is pelvic pain, tender and enlarged uterus, open cervical canal, thin, blood-stained discharge and a sensitive, bleeding internal surface. An examination of the curetted scrapings will aid us in our diagnosis.

Treatment.—In simple endometritis patient should have absolute rest, keep bowels open, a light liquid diet, hot sitz baths and vaginal douches. When the disease depends on other conditions, as malpositions, stenosis of cervix, lacerated cervix or retained placenta, growths in or about the uterus, these should have the indi-

cated treatment. In violent non-septic cases defer treatment till pain and tenderness in a great measure subside. In specific and occasionally in the infective form curettage is advisable. Be cautious in curetting a streptococcus infection. After curettage give an interuterine douche as long as fever continues. Unless the cervical canal is patulous we should use a return irrigator to permit an outflow of the fluids to prevent absorption of retained fluids. Use any antiseptic that is indicated. All cases should be well nourished and stimulated. To control temperature apply ice-bags to hypogastrium and remove when subsides. This may be followed by a hot-water bag, turpentine strops or hot poultices. In the chronic and subacute forms patient should be quiet, taking moderate exercise, loose-fitting clothing, no sexual intercourse, keep bowels open, sunlight and open air and regular habits. Nourishing foods and tonics, these will do more good than local treatment. I. Q. and S. and phosphorus are mostly indicated. A hot douche once a day and an application of iodine to the floor of the vagina every eight or ten days and should there be hyperemia of cervix scarifying will get good results. Be cautious in using intra-uterine applications.

PREVENTION OF INFANT MORTALITY

An English-Speaking Conference on the Prevention of Infant Mortality will be held in Caxton Hall, Westminster, London, on Monday morning and afternoon and Tuesday morning, August 4 and 5. The meetings will be held under the auspices of the (British) National Association for the Prevention of Infant Mortality and The Welfare of Infancy under the patronage of the King and Queen, and will convene immediately preceding the opening of the International Medical Congress.

The subjects treated will be: The responsibility of central and local authorities in infant and child hygiene. The administrative control of the milk-supply. The necessity for special education in infant hygiene. Medical problems in infant nutrition. Antenatal hygiene.

The president of the conference will be the Hon. John Burns, M. P., president for the Local Government Board. The chairman of the English executive committee is Sir Thomas Barlow and the secretary, Miss J. Halford, 4 Tavistock Square, London, W. C.

The American committee in charge of the part to be taken by the United States and Canada, will furnish information to those desiring to attend the conference. Dr. Henry L. Coit, chairman, 277 Mt. Prospect Avenue, Newark, N. J.; Dr. Philip Van Ingen, secretary, 125 East Seventy-First Street, New York City.

T. TURNER THOMAS, of the University of Pennsylvania, in discussing Local Anesthesia for Operations in the Trigeminal region (Keen's *Surgery*, Vol. VI, p. 416), says: "The anesthetization of large nerve trunks by perineural injection of cocaine solution was only possible or at least only practicable, on parts of the body on which the Esmarch constriction has made the method applicable to other parts of the body. The substitution of novocain for cocaine permits the employment, without danger, of a much larger quantity of the anesthetic in the neighborhood of a nerve trunk or to interrupt the conduction of a nerve for a much longer time."

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EDITORIALS

AMERICAN MEDICAL ASSOCIATION MINNEAPOLIS SESSION

The sixty-fourth annual session of the American Medical Association, held in Minneapolis, June 17-20, was one of the most instructive and entertaining meetings ever held. In scientific work the meeting was notable for several announcements of progress toward the conquest of disease and the work of the sections generally was much above the average. In the surgical section, Dr. W. D. Haggard, the chairman, told some very plain truths concerning the practices of some surgeons, especially condemning unnecessary operations and incompetent operators; his words ought to have a decided influence in destroying the commercial spirit that seems to have possessed the profession in recent years, manifest in the methods at least in a large number of physicians. We will endeavor to give a résumé of the section work in our next issue.

The members of the House of Delegates labored faithfully for the welfare of the organization and each member strove to do his duty. One of the most important acts of the House of Delegates was the adoption of the amendment providing that all members in good standing of constituent state associations shall be *ipso facto* members of the American Medical Association; and that any member of the association may become a fellow by paying the subscription fee for *The Journal* and applying for fellowship. Only members of the Association may become fellows and only fellows can enjoy the privileges of active participation in the proceedings of the annual meetings.

In the election of officers the delegates took a decided stand against log-rolling, vote pledging and exchanging, which augurs well for the future. Last year the old method of soliciting votes and caucusing was severely condemned, and this year such methods were almost entirely abandoned. When the nominations for president-elect were closed, five candidates had been proposed: Dr. W. N. Wishard of Indiana, Dr. W. W. Rodman of Philadelphia, Dr. H. Bert Ellis of Los Angeles, Dr. Victor C. Vaughan of Ann Arbor and Dr. John B. Deaver of Philadelphia. Four ballots were cast and Dr. Vaughan was elected.

Dr. Vaughan has demonstrated his fitness for the high honor the Association has conferred on

him by his life-long labors for the advancement of the practice as well as the science of medicine. The Missouri profession should be specially proud of his record and the little town of Mt. Airy in Randolph County (Missouri), where Dr. Vaughan was born, may exalt herself and point with pride to his achievements.

The other officers elected are: First Vice-President, Dr. Walt P. Conaway, Atlantic City, N. J.; Second Vice-President, Dr. Frank C. Todd, Minneapolis; Third Vice-President, Dr. Lillian H. South, Bowling Green, Ky.; Fourth Vice-President, Dr. Sol. G. Kahn, Salt Lake City, Utah. Secretary, Dr. Alexander R. Craig, Chicago (re-elected); Treasurer, Dr. William Allen Pusey, Chicago (re-elected). In the election of Trustees, Missouri's representative, Dr. Frank J. Lutz of St. Louis was reelected by unanimous vote, as was also Dr. W. W. Grant of Denver. Dr. C. E. Cantrell of Greenville, Texas, was succeeded by Dr. Oscar Dowling, President of the Louisiana State Board of Health. Dr. Thos. McDavitt of St. Paul was elected trustee to fill the vacancy caused by the death of Dr. C. A. Daugherty of Indiana. For many years Dr. McDavitt has been secretary of the Minnesota State Medical Association and actively identified with the work of the American Medical Association. Among the section officers, Dr. W. W. Graves of St. Louis was elected chairman of the Section on Nervous and Mental Diseases; Dr. R. L. Sutton of Kansas City, chairman of the Section on Dermatology, and Dr. Nathaniel Allison of St. Louis was elected vice-chairman of the Section on Orthopedics.

A number of associate members were elected, among them Mr. Samuel Hopkins Adams, who has done so much for the cause of honest advertising. He was nominated by the Section on Preventive Medicine. After his election, Mr. Adams was invited to address the House of Delegates, which he did in a most convincing way on the subject of medical advertising in the public press; and he encouraged the Association to continue its warfare on this class of fake advertising.

The honor of entertaining the Association in 1914 was sought by seven cities: Atlanta, Atlantic City, Chicago, Louisville, New Orleans, New York and Washington. The transportation committee recommended Atlantic City; the ballot was cast and Atlantic City was chosen.

Missouri was fairly well represented at the meeting. Kansas City carried off the honor of plurality of members present, there being 44 from that city and 42 from St. Louis. The total registration from Missouri was 126. All our delegates were present, including two from sections. Dr. Bransford Lewis from the Section on Genito-Urinary Diseases and Dr. G. Wilse Robinson from the Section on Nervous and Mental Diseases.

HOT WEATHER MEETINGS

Hot weather may deter some people from society work, but the Councilor of the 27th District is not in that class. About a year ago Dr. Elliott arranged for the organization of Texas County, which was accomplished on Aug. 12, 1912, and now he is working to have Wright and Douglas Counties become affiliated; this will probably be consummated in August. The physicians in Wright and Douglas Counties are anxious to establish a society and affiliate with the State Association, and we hope to report this accomplishment in our September number.

The physicians of Hickory County are ready to apply for a charter; they have held several meetings, and at the next meeting all the formalities will doubtless be completed. This county is in the 17th District, Dr. S. G. Kelly of Sedalia, Councilor.

Some of the societies are planning "outing" meetings for July and August. This seems to be one of the most enjoyable and entertaining methods of bringing the members together through the summer months. Scientific work at these meetings need not be omitted entirely, but that session should be a short one. The time of these meetings is usually taken up, after a brief session of formal society matters and perhaps a short paper or two, in recreation, informal talks on topics of local interest, the discussion of plans for future society work and for closer affiliation with each other and the people.

This is a good season for secretaries to dig up new ideas for holding the interest of the members and bringing all of them together.

PROCEEDINGS OF ANNUAL SESSION

In this issue we publish the proceedings of the annual meeting held at St. Louis, May 13-15. The members should read the minutes and the reports of the committees very carefully in order that they may be informed with the work which the Association has done and the plans for enlarging the usefulness of the Association. They will then be in position to cooperate with the worthy objects that our Association stands for and assist in promoting the welfare of the physicians and the Association.

CORRESPONDENCE

LETTER FROM EUROPE

A LITTLE JOURNEY TO THE HOME OF LAENNEC

It was hot in Paris, and I fear we had acquired the habit of loafing a bit in the Luxembourg Garden on our way down to the Ecole Pratique, for the shade of the trees in the open air was much more pleasing than the stuffy laboratory.

"I say," said my friend to me one morning (we may as well call him Bill, as that wasn't his name!), "what's the use hanging 'round this hot town any longer? We are not accomplishing anything. Even the artists have taken their models and left for the summer. In a week there won't be anyone in Paris but waiters and American tourists. What do you say to a little outing down on the South Coast of Brittany?"

"We came over here to work," I replied, "and my conscience will not allow me to waste time on outings that have no relation to the advancement of my medical knowledge."

My friend looked disgusted. "I suppose," he said, "that you have been laboring under the delusion that the 'Bullier' is a clinic, ever since you have been in Paris."

I did not consider his insinuation worthy of reply, and to keep the conversation strictly within medical bounds, I observed, after a brief interval of silence, that Laennec was born in Quimper, and that Quimper was on the south coast of Brittany, and while it wouldn't do for two enthusiastic students who had come abroad strictly for medical study to go running off for a vacation, still I couldn't see why it wouldn't be a very edifying proceeding to make a pilgrimage to the birthplace of one of the great makers of medicine.

Bill's grouch immediately disappeared, even to the extent that we dined that evening at "Les Quatre Sergents" and discussed our coming trip over a bottle of their famous Volney.

And thus it happened that the very next day we took seats in a stuffy second-class railway compartment at the Gare du Quai D'Orsay, a train bound for Tours. It was necessary to stop at Tours, Bill argued, in order to see the Chateau where Ambroise Paré visited the Duke de Guise. We owed it to ourselves not to let anything of medical interest escape us.

I agreed, and as there were a number of Chateaux in the neighborhood of Tours and we might have to visit them all before we found the right one, I suggested that we look up a pension instead of going to a hotel. I was prompted somewhat in this suggestion by the advertisement of a Tours pension that I had accidentally run across in which the proprietor described his place as *recherché*. One of the desires of my life had been to live in a place that was *recherché*. I didn't know what the word meant, but it sounded nice. Hereafter I'm going to use a dictionary when I meet a nice-sounding word. We went to hotels all the rest of the trip.

"There is nothing like getting knowledge first hand," said Bill, after we had spent a week among the chateaux. "Now we know that it was at the siege of Calais that Ambroise Paré treated the Duke de Guise. If it hadn't been for our painstaking investigation we might have been in error about a great physician all our lives."

"And besides," said I, "think what we have learned about Rabelais. Why, until we went out to Chinon, I didn't know even that he was a physician. Now we know that like our own Oliver Wendell Holmes, he was a professor of anatomy, and that at the University of Montpellier every candidate in medicine received the degree elad in Rabelais' gown until it got so worn that it was put in a glass show case, where it is exhibited to-day."

When we had returned to Tours from Chinon and had extracted what sleep was possible from our *recherché* beds, which were even more *recherché* than our *recherché* pension, and were trying to refresh ourselves with the matutinal coffee that was very welcome after an all-night search for the soft places of the mattresses which we had not found, Bill referred to the object of our excursion.

"We will consult," I remarked, "the '*Indicateur des Chemins de Fer*,' which must be pronounced '*Indicatur Chemin Fer*' to be understood, or just '*Indicateur*' to be *recherché*."

"By all means be *recherché*," said Bill: and so we went to a café and ordered *Menthe Blanche* (for one must order something in a café) and asked for the "*Indicateur*."

When we had found the trains for Quimper it was altogether too late to get one, for the French railroad guide known as the *Indicateur des Chemins de Fer*, combines the bulk of the *Encyclopedia Britannica* with the complexity of a differential calculus. Incidentally, however, we had noted that there were frequent trains to other chateaux in the neighborhood of Tours, and Bill, who had read the "*Lightning Conductor*," suddenly decided that it wouldn't be right to pass by some of those places without looking them up as he was sure his sister would ask him about Amboise and whether the people really went up the tower of the castle in an automobile. Besides he was sure that Charles the VIII had some famous physician living there with him at Amboise. He remembered reading about it somewhere. The man Bill had in mind as a famous physician turned out to be Leonardo de Vinci, but as Bill decided that he might have been a regular Will Mayo if he had only been born late enough, we let it pass.

As I found that we could get to Amboise by way of Chenanceaux and make it a two-day trip instead of one, we started. Our researches into medical history were not greatly enriched by our visit to either of these places, but the trip was not without result, for I learned that Bill was both a poet and a diplomat.

We had run across a very distinguished looking Frenchman in going through the Chateau of Chenanceaux, who conversed with us, and as we came out together, Bill, inspired by the view from the *terasse*, raised his hand in a magnificent

gesture and exclaimed, "*Mais, la Touraine est la France. Parfumée comme l'Italie, fleurie comme les rives du Guadalquivir*"—and a lot more rot.

But the French gentleman was overjoyed. Although he didn't say so exactly, he gave us the impression that at last he had met Americans who possessed a soul, and the result was that we went over to Amboise in the tonneau of the gentleman's Renault instead of by stuffy railroad coach.

After our previous struggle with the *Indicateur* we decided it would be unwise to attempt more than short trips at a time, and as Angiers was on our way we decided to make that city our next destination.

Now it happened that the day was a very hot one and as the noon hour approached the interior of our railway coach became more and more uncomfortable and we were getting both hungry and thirsty—especially the later. Then it was that Bill had an inspiration. "Do you know," he said glancing up from his map which he had been studying, "that at 12:15 o'clock we will arrive at Saumur?"

"Well, what of it?" I asked.

"Do you forget that excellent champagne we had one night at Gaucclair's. It was Saumur—*mousseux*. As fine a champagne as was ever put in bottles, only having such a kick to it that it cannot be exported, hence the general ignorance regarding it."

"Wine," said I, "is an alcohol, and as alcohol is a therapeutic agent we owe it to ourselves as students of medicine to investigate, especially as this is a brand that can be properly studied only in its native vineyards, owing to its bubbly resistance to glass and cork. We will stop over just one train and go on to Angiers this evening."

We may briefly state that the investigations into the quality of Saumur *mousseux* were carried out. We sat together in a little vine-covered arbor at an attractive café near the station and had the table d'hôte—with wine—and it was a rule of the house that when the bottle of wine was emptied it was replaced by a full bottle. There were several replacements and then Bill wanted to take some pictures. Fortunately, we had told the proprietor in the beginning that he must get us on the next train to Angiers. In some manner he must have carried out our wishes, for we woke up in Angiers that evening.

While on this subject I might mention that after our return to Paris, Bill came into my room one day to show me a film he had developed that didn't fit in with anything he remembered having seen. Moreover all twelve pictures on the film were churches, and Bill, as a rule, didn't spend much time photographing churches.

To return to our journey. While I was still busy with my morning coffee and regretting the ice water of little old America, Bill appeared, guide book in hand.

"Its very fortunate, indeed, that we stopped here," he announced. "The place is a perfect mine of medical lore. First of all, there is the interesting old Hospital of St. Jean, built in the twelfth century. Then there is a wonderful modern 1,500 bed hospital, and M. ——— works there. He is the man who holds the present record for the greatest number of meters of intestine removed at one sitting. Think what an inspiration it will be to see him! There is also a preparatory school of medicine."

So we went out and engaged a cab, the *cocher* insisting that he understood the thirst for medical knowledge that possessed us and that digging up medical lore was one of the finest things he did. However, despite our combined resistance, it seemed that the *cocher* has a regular route, and we had to see David's statue of René of Arjou, the Cathedral of St. Maurice, the Castle of Angiers and the other regular tourists' sights before we could finally convince him that he must take us to the Hospital of St. Jean. And when we got there we found it had been converted into a museum.

We discharged our *cocher*, although he insisted that we ought not to miss seeing the place where Goeffrey, having dressed his wife in her best party gown, led her to the stake where he burned her swiftly and thoroughly for infidelity.

Then it was lunch time, after which we gazed on the dome of the new modern hospital which seemed far away for a walk, and we didn't dare try another *cocher*. Finally Bill had another of his inspirations. Why not get the waiter to phone the hospital and see if Monsieur le docteur was there. If not, why go? He might come to America some time and then we could see him.

The waiter phoned, and much to our (verbally expressed) disappointment, the doctor was not at the hospital. So we went back to our hotel for an afternoon nap.

That evening after dinner Bill spoke again: "Considering the fact that we have done so much historic medical research to-day—having seen the place where a hospital once was—wouldn't it be a good idea to rest up for a day or two before pushing on to Laennec's birthplace?"

I agreed that the idea was hygienic and asked where we would go for the rest. It seems that Bill had been reading again and had found out that Auray was a delightful spot, much frequented by artists, picturesque and all that, and moreover we could take a side trip from there to Carnac to see the megalithic monuments. For, as he stated, men in science don't want to get too one-sided, even at the sacrifice of a day or two of medical historic study. We could improve the aesthetic side of our minds with art and archaeology.

However, improving as such subjects may be, they have no place in this purely medical account, and so we must pass over the three weeks spent at

Aurey. Bill sighed as he waved a farewell from our departing train, which was to take us on at last to our final destination. "If the south coast of Brittany is all like this," he said, "I don't see why Laennec ever left it for Paris."

It was even when we arrived in the little town of Quimper, and having had our dinner at the usual tiny and tidy inn, we walked out to see the town. Afterward we were told that others experienced the same feeling of sadness in Quimper that we experienced, but we thought it was all our own, due to our thoughts of the great Laennec, who, as a child, had played in these same streets, perhaps on the same cobble stones that we were now walking on. For Brittany and the Briton are apart from the rest of the world; it is a world in itself, unchanged, unmodernized, rich in traditions, filled with poetry and faith—a faith as simple and sincere as can be found in history.

So we walked among the shadows of the chestnuts and poplars and saw across the Odet the sharp rise of massive rock crowned by the dark forest and beheld through the broken lines of the irregular slanting roofs the gray spires of the great Cathedral of St. Corentin, said to be the most beautiful cathedral in all Brittany.

When we got back to our Inn, Bill took out his book and began to read to me about Laennec. There was really very little in the guide book about him (many more words were given to the cathedral), but the substance was a follows.

"René Théophile Hyacinthe Laennec was born here in 1771. He is known as the father of auscultation by means of his work *De l'auscultation médiate*, published in 1819. He moreover advanced the science of medicine by comparing the appearances found at post mortem with the symptoms during life."

Bill, in disgust, threw the book on the floor; "so little for so great a man," he said. "Tomorrow we will question the people of the town, and here in the home of tradition we will hear all the little episodes of his youth and synthesize the signs that pointed the way to his great genius."

And so the next day we walked again in the streets of the quaint old town, and this time saw it bathed in a warm sunlight that touched the jumbled roofs with gold; we watched from the rusty iron-railed bridges the little red-sailed fishing boats quietly riding at anchor; we saw along the streets the wrought-iron gateways and the ivy-covered walls; we admired the carved angels over the porch of the cathedral and read the inscription, "Malo au riche duc."

At last, in the Place St. Corentin, we came on the bronze statue of Laennec, erected in 1868 to the inventor of the stethoscope."

But, alas, no information could we get regarding the original. We asked of young, of old, of middle aged; but they all shrugged their shoul-

ders, shook their heads and smiled. Not even the oldest inhabitant had ever heard of the famous physieian we had sought through so many perils to learn of at first hand. At last, however, an ancient gentleman, to whom we had expressed our disappointment on the town somewhat sharply, had an inspiration and said: "It is true *messieurs*, that I know not of the doct  ur Laennee, but I can show you the fountain in which is the marvelous fish, which, though St. Corentin cuts off half of it every day for his luneh, nevertheless remains whole."

That afternoon we sadly boarded the fast express that runs from Brest to Paris.

R. L. T.

SOCIETY PROCEEDINGS

Missouri State Medical Association

Fifty-Sixth Annual Meeting, held at St. Louis,
May 13-15, 1913

MINUTES OF THE HOUSE OF DELEGATES

Tuesday, May 13, 1913—Morning Session

The House of Delegates was called to order by the President, Dr. Robert M. Funkhouser, at 10:15 a. m.

At rool call seventy-two members answered present as follows:

County	Delegate
Atchison.....	Eugene P. Taylor, Fairfax
Audrain.....	J. G. Moore, Mexico
Barry.....	C. T. Dusenberry, Monett
Barton.....	T. H. Duckett, Milford
Bates.....	V. J. Cumpton, Pleasant Gap
Benton.....	W. G. Jones, Lincoln
Boone.....	G. L. Noyes, Columbia
Butler.....	Wm. Spaulding, Poplar Bluff
Caldwell.....	G. S. Dowell, Braymer
Callaway.....	G. D. McCall, Fulton
Camden.....	G. T. Myers, Macks Creek
Cape Girardeau.....	E. H. G. Wilson, Cape Girardeau
Carroll.....	Lynn Samuel, Carrollton
Cass.....	H. Jerard, Pleasant Hill
Cedar.....	E. H. Liston, Cedar Springs
Chariton.....	J. F. Welch, Salisbury
Clay.....	F. H. Matthews, Liberty
Clinton.....	M. L. Peters, Cameron
Cole.....	H. G. Shobe, Jefferson City
Cooper.....	Geo. J. Weitz, Boonville
Crawford.....	E. L. Hume, Bourbon
Daviess.....	Wm. L. Brosius, Gallatin
Franklin.....	C. F. Briegleb, St. Clair
Gasconade-Maries-Osage.....	J. W. Burgess, Belle
Greene.....	T. A. Coffelt, Springfield
Grundy.....	E. J. Mairs, Laredo
Harrison.....	Wm. H. Wiley, Ridgeway
Henry.....	R. D. Haire, Clinton
Howell.....	J. H. Elliott, West Plains
Iron.....	R. W. Gay, Ironton

1912-1913

Jackson.....	E. H. Thrailkill, Kansas City
Jackson.....	Wm. Frick, Kansas City

County	Delegate
1913-1914	
Jackson.....	F. E. Murphy, Kansas City
Jackson.....	J. N. Jackson, Kansas City
Jackson.....	C. C. Connover, Kansas City
Jackson.....	C. Lester Hall, Kansas City
Jasper.....	A. N. Bobbitt, Joplin
Jefferson.....	R. E. Donnell, De Soto
Johnson.....	O. B. Hall, Warrensburg
Knox.....	H. J. Jurgens, Edina
Laclede.....	J. M. Billings, Lebanon
Lawrence-Stone.....	H. L. Kerr, Crane
Livingston.....	H. M. Grace, Chillicothe
Madison.....	C. A. Anthony, Fredericktown
Marion.....	Thos. Chowning, Hannibal
Miller.....	W. S. Allee, Olean
Mississippi.....	W. S. Love, Bertrand
Moniteau.....	J. P. Burke, Jr., California
Monroe.....	R. H. Goodier, Monroe City
Montgomery.....	F. P. Wyatt, McKittrick
Morgan.....	T. J. Gibbs, Proctor
New Madrid.....	J. W. Rhodes, Pt. Pleasant
Newton.....	H. L. Porter, Seneca
Pemiscot.....	T. A. Michie, Tyler
Pettis.....	D. P. Dyer, Sedalia
Phelps.....	S. L. Baysinger, Rolla
Pike.....	R. J. Guy, Paynesville
Ralls.....	H. B. Norton, Center
Randolph.....	D. A. Barnhart, Huntsville
Ray.....	R. E. Sevier, Richmond
Reynolds.....	T. T. O'Dell, Ellington
Saline.....	F. A. Howard, Slater
St. Charles.....	J. M. Jenkins, St. Peters
St. Francois.....	O. A. Smith, Farmington
St. Joseph-Buchanan-Andrew.....	W. T. Elam, St. Joseph
St. Louis.....	C. W. Fassett, St. Joseph
St. Louis.....	Howard Carter, Webster Grove

1912-1913

St. Louis City—
E. Lee Dorsett, St. Louis
Oscar H. Elbrecht, St. Louis
Louis H. Hempelmann, St. Louis
Robt. E. Schlueter, St. Louis

1913-1914

Percy H. Swahlen, St. Louis	
Fred W. Bailey, St. Louis	
Robt. Barclay, St. Louis	
Orville H. Brown, St. Louis	
Walter B. Dorsett, St. Louis	
Phelps G. Hurford, St. Louis	
Albert F. Koetter, St. Louis	
A. Edward Meisenbach, St. Louis	
Wm. H. Stauffer, St. Louis	
Frederick J. Taussig, St. Louis	
Schnyler.....	W. A. Potter, Lancaster
Scotland.....	A. E. Platter, Memphis
Scott.....	G. S. Cannon, Fomfelt
Sullivan.....	W. L. M. Witter, Milan
Taney.....	Guy B. Mitchell, Branson
Texas.....	Leslie Randall, Licking
Vernon.....	J. T. Hornbeck, Nevada
Wayne.....	W. S. Bailey, Leeper
Webster.....	W. J. Rabenau, Fordland

Dr. W. S. Allee, Olean, moved that the minutes of the last meeting (1912) be approved as published in THE JOURNAL. Seconded and carried.

Dr. H. S. Crawford, Harrisonville, Vice-President, was called to the chair while the President read his message and recommendations as follows:

To the House of Delegates, Missouri State Medical Association:

In addressing you I am not unmindful of the responsibility which the president of such a representative organization as this assumes in taking office.

The fifty-sixth annual meeting, I trust, will be long remembered and be a red-letter one. The fiscal year that has passed has been crowded with solicitude and anxiety. The work has been crowned with success and it is fair to assert that organized medicine has been established on a firm, solid foundation in Missouri. Our endeavors should still be to raise and advance our standards of preparation and efficiency.

The Association has accomplished a great deal this last year and no one can form a just estimate of this work unless connected with the office. One is very much mistaken if he thinks that this Association, which stands for organized medicine, does not amount to much; and no one can afford to ride over its by-laws or to use this organization to selfish ends. No one person, no organization, can be or is superior to this one in the state of Missouri in medical matters.

This Association should be the head and center of medical activities of every kind and character in the state, and the American Medical Association should not issue any communications excepting through the state organization.

The medical profession must disabuse the public mind that there is an intention on its part of producing or favoring a medical trust. Conditions are changing and will have to change so that fewer doctors will be "ground out" by the medical schools. The schools have done a great injury to the medical profession and the public. Did it ever occur to the public that what helps the public has impoverished the doctor; that all the prophylactic efforts and sanitary and hygienic advances of the profession have meant a lessening of sickness and incidentally a decrease in the income of the doctor?

The younger men of the profession realize that there is but a modest living in the future for the doctor and that the large fees demanded by doctors are a menace to the standing of the medical profession; that the rich feel that they have been and are being exploited by the doctor and they are not far wrong. It is but a species of graft and must of necessity react on the good name of the noblest profession. One of the effects is that little or no endowments of gifts have been made to medical education. Of course, the distinction between medical education and medical science must not be lost sight of. The medical man gives so much, no more, when he gives his services to the public, and should receive a reasonable fee.

During the present administration but one "kick" or complaint has been received by the President to the effect, according to the writer of the communication, that an editorial had been published in *THE JOURNAL* with an ulterior meaning. I have been unable to divine the writer's meaning and intent, even to the present time, though I have requested him to be more explicit. This administration of the Association has been impartial and has refused to be compromised politically or otherwise.

The Association indited two communications to the governor expressing a willingness to cooperate in medical and charitable matters relating to the state—nothing came of them.

During the fiscal year the President attended a number of meetings throughout the state, but for lack of time regretted he could not have been present at more. The following counties were visited: July 25, 1912, Crawford County (Steelville); September 12, Randolph County (Huntsville); October 3, Pettis County (Sedalia); December 5, Randolph County (Moberly); December 12, Cass County (Harrisonville); January 15, St. Louis County (Webster Groves).

After carefully considering the status of the regulations of the practice of medicine in the different states as compared with those of Missouri the committee came to the conclusion it was wiser and safer to maintain the present status of medicine in Mis-

souri rather than to jeopardize it by asking for more legislation, and for that reason no new bills were introduced. It was thought best to keep a supervision over the field and prevent the enactment of unwise and injurious legislation, which was done. There were several objectionable bills introduced, chief of which were Nos. 283, 650, 854; the one on optometry, 283, entailing much annoyance and anxiety as it was championed by one of our own members and an officer of the Association. The Association has been compelled to take definite and decided stand regarding the bill on optometry; happily it was defeated. If ever passed it would establish a double standard of medicine thereby creating a "near-doctor," and producing a most unfortunate and lamentably chaotic medical state of affairs.

Let us not go backward, but with a standard of noble and high ideals held aloft, press forward in the desire to uplift humanity.

It is recommended that a woman auxiliary member be elected to or placed on the Committee on Public Policy and Legislation which committee should be enlarged and renamed the Committee on Health and Public Instruction to correspond with the Committee on Health and Public Instruction of the American Medical Association.

It is recommended that the Program Committee, or Committee on Scientific Work, should be reformed, said committee to consist of three members appointed by the President or Nominating Committee.

It is recommended that the dues be raised. As work has been enlarged and consequently new demands on our treasury, it is necessary to increase the dues of the State Association at least one dollar (\$1.00) so that they will be \$3.00.

It is recommended that all members of the State Association should be members of the American Medical Association, and that the plan devised as published in *The Journal of the American Medical Association* and republished in our *JOURNAL*, is a good one; to wit: that those who pay \$5.00 for *THE JOURNAL* be made Fellows, merely a way of designating that portion of the 70,000 who pay for the *JOURNAL*—as in reality all members of the State Association are members of the A. M. A.

More attention and interest should be given to state and county legislation and legislators. Every effort should be exerted to drive out the quacks and illegal practitioners and the Association should aid and assist the county societies.

The Association should still speak plainly on contract practice and the secret splitting of fees.

In the future more attention should be given to the lecture feature which is becoming quite popular throughout the state and country.

The activities of the organization are increasing but there is a lack of funds to advance the many diverse interests of the organization and the medical profession.

The Secretary's office is practically the office of the committees, as it should be, and the duties of the Secretary are increasing.

Our *JOURNAL* has markedly improved and I hope to see the time when most, if not all, of its advertisements will be eliminated from its pages. It is beneath the dignity of our profession to be compelled to resort to such methods to raise money.

I recommend that a closer scrutiny be exercised over advertisements to be printed in *THE JOURNAL* and all objectionable ones be eliminated.

It is recommended that an investigation or inquiry be instituted regarding commissions paid by firms to doctors for business sent them; that this body place itself on record condemning such practice.

The defense feature of the Association should be amplified and enlarged and every effort made to aid the worthy.

It is recommended that this Association protest against granting permission to doctors of other countries to practice medicine in the United States excepting by conforming with the due forms and requirements to practice medicine in this country.

It is recommended that this Association support and approve the findings of the national association for the study and prevention of tuberculosis which is to the effect that no specific cure for tuberculosis has been discovered that deserves the confidence of the medical profession and the public.

By instruction of the President and the chairman of the Judicial Council the following telegram was sent to our United States Senators W. J. Stone and James A. Reed, Washington, D. C.:

"The Missouri State Medical Association objects to granting Dr. Friedmann the right to practice medicine in the District of Columbia until he has complied with the usual regulations. The work of Dr. Friedmann in Germany, Spain and in this country has not passed beyond the experimental stage, and until the scientific world learns the nature of his proposition it should not have the sanction of our government.

E. J. GOODWIN, Secretary."

I recommend that the Association purchase a suitable American flag and that "Old Glory" be in evidence during the meetings of the Association.

In order to command respect, the standard of professional ethics and medical education must be raised. Our duty to the public should not only be exerted in matters of hygiene, sanitation and preventive medicine, but also in all questions relating to the improvement of the mind and body. We should see to it that all medical matters be understandingly presented to the public, and that the doctor should take precedence in questions of practical eugenics, all questions of a psychologic and physiologic character so frequently treated of by ignorant laymen. It is the duty of the physician to help in forming public opinion.

There never was a time when this country more truly needed the guiding hand of medicine in the great questions of the hour than now; when it should have a department of medicine and a member of the medical profession in the cabinet.

ROBERT M. FUNKHOUSER, President.

On motion the message and recommendations were referred to the Judicial Council.

Dr. T. O. Klingner, Springfield, chairman of the Committee on Revision of the Constitution and By-Laws, stated that the amendment left over from last year to amend Section 10 of Chapter 12, should be acted on at this time; and the committee recommends the adoption of the amendment.

The Secretary read the amendment as follows:

Amend Chapter 12, Section 10, of the By-Laws by adding the following thereto: No one shall become a member of any component county society, nor continue as such, who engages in contract practice with any lodge, society or individual, unless he shall receive for services rendered, the regular fee, as per fee bill established by said society. Provided that this shall not prohibit an agreement for a particular case nor apply to examinations for an adequate fee.

No one shall become a member of any component county society, nor continue as such, who is guilty of soliciting patronage or obtaining patients by a division of fees, or by other means of inducing physicians or other persons to bring patients to him for a consideration, for treatment or operation.

Dr. Jackson, Kansas City, moved the adoption of the amendment. Second by Dr. Schlueter.

Dr. McCall moved the amendment be separated into sections and the vote taken on each section. Seconded and carried.

After a free discussion, Dr. Elam, St. Joseph, moved the adoption of the first section. Seconded and carried.

Dr. Jackson, Kansas City, moved the adoption of the second section. Seconded by Dr. Lutz. Carried.

Dr. Jackson, Kansas City, moved the adoption of the amendment in its entirety. Seconded and carried.

The President appointed the following a reference committee on constitution and by-laws: Jabez N. Jackson, J. P. Burke, Jr., J. H. Elliott.

The other recommendations in the report of the Committee on Constitution and By-Laws were referred to the Reference Committee.

Dr. Koetter, St. Louis, introduced the following amendment:

The delegates from the St. Louis Medical Society recommend the following change of Section 1, Chapter IX, of the By-Laws: Change the words "two dollars (\$2.00)." in the first line to read "three dollars (\$3.00)." so that the section shall read as follows: An assessment of three dollars (\$3.00) per capita on the membership of the component societies is hereby made the annual dues of this Association. The secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates and list of non-affiliated physicians of the county to the Secretary of this Association on or about December 31, in advance of each annual session.

On motion the amendment was referred to the Reference Committee on Constitution and By-Laws.

Dr. Jackson, Kansas City, moved the report be adopted and the actions of the Council be indorsed by the House of Delegates. Seconded and carried.

The report of the Committee on Scientific Work was read by the chairman, Dr. Neilson, St. Louis, and on motion referred to the Reference Committee on Constitution and By-Laws. (See page 31.)

The report of the Committee on Public Policy and Legislation was read by Dr. A. W. McAlester, Jr., Kansas City. (See page 31.)

Dr. Breuer, St. James, moved the adoption of the report. Seconded and carried.

Dr. Schleuter, St. Louis, for the Defense Committee, read the report of that committee. (See page 30.)

Dr. Elam, St. Joseph, moved the report be adopted and referred to the Judicial Council. Seconded and carried.

Dr. Breuer, St. James, read the report of the Publication Committee. (See page 27.)

Dr. W. B. Dorsett, St. Louis, moved the adoption of the report. Seconded and carried.

Dr. Goodwin, St. Louis, read the report of the Secretary. (See page 26.)

Dr. Elam, St. Joseph, moved the adoption of the report. Seconded and carried.

Dr. Jackson, Kansas City, moved that a vote of thanks be extended the Secretary for his most efficient services. Seconded by several and carried.

Dr. J. Franklin Welch, Salisbury, read the report of the Treasurer. On motion the report was received and referred to the Judicial Council. (See page 27.)

The President read a letter from the Pevely Dairy Company inviting the members to visit the dairy.

The President introduced Dr. A. R. Craig, Secretary of the American Medical Association. Dr. Craig addressed the House of Delegates in a few words on the importance of the correlation of the work of the state associations and the American Medical Association.

On motion adjourned to 2:30 p. m.

Tuesday, May 13, 1913—Afternoon Session

The House of Delegates was called to order by the President at 3:05 p. m.

At roll call forty-five members answered present.

Dr. A. W. McAlester, Jr., Kansas City, for the Committee on Trachoma, stated the committee had been unable to carry on any investigation concerning this disease on account of the lack of funds. He

recommended that future committees should be provided with the means to conduct such investigation.

The report of the Committee on Tuberculosis, on motion by Dr. Hall, Warrensburg, was received as published. (See page 34.)

Dr. Robert Barclay, St. Louis, presented the report of the Committee on Necrology, and asked that certain additions and corrections be incorporated in the report. On motion the report was received and the alterations ordered. (See page 35.)

Dr. C. Lester Hall paid a tribute to Dr. Peyton L. Hurt of Boonville, now deceased.

Dr. Wm. Frick, Kansas City, moved the report of the Committee on Vaccination be deferred until Thursday morning. Seconded and carried.

The selection of the next place of meeting being the next order of business, Dr. W. A. Clark, Jefferson City, moved that Jefferson City be selected as the place of meeting for the 1914 session. Seconded by Dr. W. S. Allee.

Dr. A. N. Bobbitt, Joplin, placed the city of Joplin in nomination for the meeting. Seconded by Dr. C. L. Hall, Kansas City, and Dr. T. A. Coffelt, Springfield.

The Secretary read a telegram from the Commercial Club of Excelsior Springs inviting the Association to meet in that city in 1914.

Nominations for the meeting place were closed and a rising vote taken on Jefferson City and Joplin. The count showed Joplin twenty-six, Jefferson City twenty-three.

Dr. Breuer, St. James, moved a revision of the count. Seconded.

Dr. Hall, Kansas City, moved to table the motion. Seconded and carried.

Dr. Clark, Jefferson City, asked permission to withdraw the nomination of Jefferson City, which was granted and then Dr. Bricleb, St. Clair, moved that the vote for Joplin be made unanimous. Seconded and carried.

Dr. Lutz, St. Louis, stated that the Committee on Cancer had no report to make.

The President appointed the nominating committee as follows: W. S. Allee, T. H. Duckett, R. E. Donnell, Robt. D. Haire, F. H. Matthews, Wm. Frick, Thos. Chowning, R. E. Schlueter, T. A. Cofflet, W. T. Elam.

On motion the House adjourned until Thursday, 9 a. m.

Thursday, May 15, 1913

The House of Delegates was called to order by the President, Dr. R. M. Funkhouser.

On motion of Dr. Breuer, St. James, seconded by Dr. W. S. Allee, the reading of the minutes was dispensed with.

Report of the Nominating Committee was read by Dr. W. S. Allee as follows: Vice-Presidents, C. H. Neilson, St. Louis; T. J. Downing, New London; M. B. Austin, Brunswick; G. D. Allee, Lamar; A. E. Hertzler, Kansas City.

Delegates to American Medical Association, E. J. Goodwin, St. Louis, and R. M. Funkhouser, St. Louis.

Members Committee on Public Policy and Legislation, A. R. McComas and R. M. Funkhouser, St. Louis; auxiliary member, Dr. Dora Greene-Wilson, Kansas City.

Defense Committee, W. B. Dorsett and R. Emmet Kane, St. Louis.

Cancer Committee, Frank J. Hall, Kansas City.

Vaccination Committee, F. H. Matthews, Liberty.

Councilors, Sixth District, A. C. Crank, Canton; Ninth District, A. R. McComas, Sturgeon; Eighteenth District, Frank DeVilbiss, Tipton; Twenty-First District, G. M. Rutledge, Ste Genevieve; Twenty-Fourth District, T. W. Cotton, Bernie.

Delegates to International Medical Congress, George Dock, F. J. Lutz. We also recommend that the President and Secretary of the State Association be authorized to give credentials to any member of the Association who may desire to attend the congress.

W. S. ALLEE, Chairman.
T. H. DUCKETT,
R. E. DONNELL,
N. T. ELAM,
R. D. HAIRE,
F. H. MATTHEWS,
WM. FRICK,
R. E. SCHLUETER,
T. A. COFFLET,
THOS. CHOWNING,
The Committee.

Dr. Breuer, St. James: You will note that in the report there were only two members of the Defense Committee nominated. This is due to the fact that the committee thought one of the members of the Nominating Committee would be par excellence the best person to serve as chairman of the Defense Committee. He refused to accept a place on the committee because he was a member of the Nominating Committee. It affords me great pleasure to place Dr. R. E. Schlueter, St. Louis, in nomination as chairman of the Defense Committee.

Dr. Allee: I desire to second the nomination of placing Dr. Schlueter as chairman of the Defense Committee. Carried.

The President: The report of the Nominating Committee as a whole is before you. What will you do with it?

Dr. Breuer moved that the report be adopted as a whole. Seconded and carried.

Dr. Lutz made the following report for the Judicial Council:

REPORT OF THE JUDICIAL COUNCIL TO THE HOUSE OF DELEGATES

May 15, 1913

The Judicial Council, to whom was referred the address of the President, begs leave to make the following recommendations to the House of Delegates:

1. We recommend that the assessment of the Society be raised \$1.00 per member each year so that the annual assessment hereafter shall be \$3.00 per member.

2. We recommend that our delegates to the American Medical Association be instructed to favor the proposition according to which all members subscribing to *The Journal of the A. M. A.* be made fellows of the A. M. A.

3. We recommend that the name of the Committee on Public Policy and Legislation be so changed as to read the Committee on Health and Public Instruction.

4. We recommend that the Committee on Program shall consist of three members to be appointed by the President, and that the Secretary of the said organization be one member of this committee.

5. We desire to give expression of our opinion that no one shall be admitted to the practice of medicine in this country except by complying with the duly prescribed forms. We further recommend that the alleged cure for tuberculosis has not gone beyond the experimental stage and that the results hitherto obtained do not warrant the endorsement or recommendation of the remedy by the scientific world.

6. We recommend that the Association purchase an American flag which shall be displayed at all our meetings.

7. We recommend that the Publishing Committee be instructed to investigate whether any commissions are paid to physicians by instrument or other firms, and we further recommend that this committee be instructed to exercise the closest scrutiny of all advertisements offered to our JOURNAL.

8. We recommend that a woman member of our organization be added as an auxiliary member to the Committee on Health and Public Instruction, who shall work in harmony with and under the supervision

of the Committee on Health and Public Instruction.

9. We recommend to the House of Delegates that \$750 be transferred from the general fund to the defense fund, and that the executive committee of the Judicial Council shall be authorized to transfer to the general fund so much of this sum as may be necessary to defray current expenses. The Council furthermore recommends that a vote of thanks be tendered by the Missouri State Medical Association to all those members of the legislature who assisted in preventing the enactment of proposed amendments to existing medical laws.

The Council wishes also to submit for your endorsement the following:

After hearing all the evidence by a subcommittee and subsequently by the Council as a whole, concerning the contentions of physicians residing in Lafayette County, the Council has resolved that the charter of the Lafayette County Medical Society be revoked on account of irregularities and that the reorganization of the profession of the Lafayette County be effected by the organization of a county society to which all eligible physicians of Lafayette County shall be admitted.

The committee also wishes to inform the House that in accordance with the by-laws of the Association it has elected Dr. E. J. Goodwin, Secretary of the Association for the ensuing year, and Dr. J. Franklin Welch, Treasurer.

All of which is respectfully submitted for your approval.

F. J. LUTZ, Chairman.

Dr. Elam moved the adoption of the Council's report and recommendations. Seconded and carried.

Report of the Reference Committee on Constitution and By-Laws by Dr. Jackson as follows:

The committee reports favorably on the proposed amendments to the by-laws and these can be acted on at this session. We also report favorably on the amendments to the constitution but they cannot be voted on at this session as such amendments must lie over for one year.

Dr. Lutz moved the report be adopted. Seconded and carried.

Dr. Jackson moved to adopt the amendment to Section 2, of Chapter 8, as follows:

Amend Chapter 8, Section 2, of the By-Laws to read: The Committee on Scientific work shall consist of three members to be appointed by the President. One of these shall be the Secretary of the Association and he shall act as its chairman.

It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly as practicable. Seconded and carried.

Dr. Jackson moved that Section 5, of Chapter 6, of the By-Laws be annulled as recommended by the committee. Seconded and carried.

Dr. Jackson moved to adopt the amendment to Section I, of Chapter 9, of the By-Laws to increase the state assessment from \$2.00 to \$3.00. Seconded and carried.

Dr. Jackson moved that the medical and surgical sections be suspended. Seconded by Dr. Breuer. Carried.

The report of the Committee on Expert Testimony was read by Dr. C. R. Woodson. (See page 27.)

Dr. Wm. Frick, Kansas City, stated the chairman of the Vaccination Committee wished to have further time for that committee. Granted.

Dr. J. F. Welch read the following resolutions:

WHEREAS, We believe the passage of the Owen bill now before congress to create a department of health with an executive as a member of the President's cabinet is a most pressing need in the conservation of the health and lives of the people of the nation; therefore be it

Resolved, That the Missouri State Medical Association declares its earnest support of the Owen bill; and be it further

Resolved, That our senators and representatives in congress assembled be informed of our attitude toward this bill and they be requested to lend their support and influence in every manner to the passage of the Owen bill.

Dr. W. T. Elam, St. Joseph, moved the adoption of the resolutions. Seconded and carried.

Dr. F. J. Lutz, St. Louis, moved that the report and resolutions of the Committee on Expert Testimony be submitted to the supreme court of this state with the request that they give a ruling concerning the legality and practicability of the contents. Seconded and carried.

Dr. E. H. G. Wilson, Cape Girardeau, moved that House extend to the medical profession of St. Louis its best wishes, both as a society and as individual members, and that our Secretary send communications from the House of Delegates to this effect. Seconded and carried.

On motion of Dr. Allee, duly seconded, the House adjourned sine die.

MEETING OF JUDICIAL COUNCIL

Tuesday, May 13, 1913

At roll call sixteen councilors were present as follows: L. A. Todd, St. Joseph; J. B. Wright, Trenton; L. W. Cape, Maplewood; A. R. McComas, Sturgeon; C. H. Dixon, Holliday; J. B. Brummall, Salisbury; C. M. McConkey, Lathrop; F. E. Murphy, Kansas City; W. A. Clark, Jefferson City; F. J. Lutz, St. Louis; G. S. Cannon, Fomfelt; T. C. Allen, Bernie; T. T. O'Dell, Ellington; W. H. Breuer, St. James; J. H. Elliott, West Plains.

The chair appointed Dr. Brummall, Dr. Breuer and Dr. O'Dell as Auditing Committee, to report on Thursday, May 15.

The Secretary stated that a committee wished to be heard by the Council. The matter concerned a society which had been established by former members of the Lafayette County Medical Society and who had styled their society the "Lafayette County Medical Society of Regular Physicians." The executive committee in answer to the request for a charter for this society had answered that not more than one county society could be chartered in one county and had refused the charter requested. Dr. J. J. Fulkerson of Lexington was present and wished to present the side of the newly formed society. Dr. Braecklein, the president of the Lafayette County Medical Society, represented the county medical society. On motion of Dr. Breuer, duly carried, the chair appointed a committee of three to hear the testimony and make a report to the Council, namely, Drs. Murphy, Allen, Todd.

The councilors' reports were then heard. Dr. L. A. Todd, Second District, reported the societies in that district in good condition. Dr. Wright, Fourth District, reported the district in good order. He stated that the fee-splitting question was causing some discussion. Little interest was shown in Sullivan County meetings. Grundy Society had passed resolution in favor of fee-splitting. Dr. Cape, Eighth District, reported all counties in district organized except Lincoln County.

Dr. C. H. Dixon, of the Tenth District, reported as follows: I have tried to meet every member in Mon-

roe and Randolph counties during the year. Having visited the meetings in both places, I did not go into Macon County, knowing I had an able lieutenant there in the person of Dr. Miller, of Macon, who has his county almost unanimously in line, 34 out of 37 being members.

There have been held special meetings in all the counties during the past year; two in Macon County; at one of these Dr. Eusterman, of Rochester, Minn., held a clinic and at the other Dr. Connover, of Kansas City, held a clinic.

In Randolph County an unusual thing occurred for a county meeting, there being present Dr. Funkhouser, president of Missouri State Medical Association; Dr. Goodwin, State Secretary; Dr. Franklin Welch, Treasurer; Dr. Connover, a Vice-President and the Councilor of the District.

In Monroe County a special meeting was held with Dr. Connover holding clinics and public meetings at night, with address by Dr. Lutz. All these were very instructive and will result in great good.

I am going to try next (or this) year to organize a District Association to hold at least one or two meetings a year.

Dr. Brummall, Eleventh District, reported societies working well. Dr. McConkey, Twelfth District, reported a fee bill adopted by Caldwell County which gave satisfaction; reported work in Clay County of driving out persons not entitled to practice. Dr. Murphy, Thirteenth District, reported the League of Medical Freedom very active in the district. The society had been able to have passed a satisfactory ordinance relative to the control of quacks; he asked that some recognition be given newspapers printing editorials of assistance in public health matters. Dr. Lutz, Twentieth District, reported the most important action of year in St. Louis Medical Society was the indorsement of the action of the executive committee as to legislative matters, bringing the St. Louis society into accord with the State Association as to actions of members of the organized profession; increased activity in Franklin County. Dr. Allen, Twenty-Third District, reported societies in usual condition, some sentiment favorable to the optometry bill. Dr. O'Dell, Twenty-Fifth District, reported increased interest in societies; fee schedule specified in Reynolds County, and stated he believed this action contrary to the constitution of the Association.

Dr. J. H. Elliott of the Twenty-Seventh District: With the assistance of the Secretary of the Association we organized a society in Texas County on Aug. 8, 1912, with a membership of fifteen doctors. Dr. Randall was chosen President and Dr. Edens Secretary. Dr. Goodwin then accompanied Dr. Elliott to West Plains, Howell County, and was the guest of the Commercial Club, where he gave an address on "Public Hygiene" at the luncheon hour. At 2 p. m. he met with the Howell County Medical Society and gave an instructive address to that association. At 8 p. m. he gave a popular address on "Municipal Sanitation." Efforts are being made to organize Douglas and Wright Counties and prospects are very favorable for a successful working organization in both. Howell County Society has been arranging to exchange essayists with the Greene County Society, from which a great deal of good is expected to come. On Jan. 18, 1913, a lecture on "Skin and Cancer" was given by Dr. R. E. Hogan, of St. Louis, to the society and the public at West Plains.

Dr. A. H. Madry of the Twenty-Eighth District reported that the Twenty-Eighth District had not had the attention that he intended it should have, on account of the impaired condition of his health. The seven county societies that cover the eight counties have gotten in very good working condition and have not particularly needed any help. There is a more fraternal feeling and a healthier professional senti-

ment than ever before. Whenever he could he advocated rotation in office as conducive to the good spirit and well-being of the society, and had tried to persuade members of the profession that to hunt for points of harmony between individual members was now the order of the day, rather than digging up kinds and degrees of difference. So long as doctors continue to be made of anything short of full stock celestial material there will be jealousies and occasional strife, but these faults can be kept at the minimum by a liberal education and proper fraternal intercourse. The Taney County Medical Society deserves especial mention. With hardly physicians enough in the county to fill all the offices it is at work, and in addition to the benefits derived at home is furnishing inspiration for many numerically stronger associations. Webster County Society has all the eligible physicians of that county on its membership roll. Its work seems to go on smoothly and harmoniously and we might say almost or quite ideally. This society has some of the best society workers to be found anywhere. The topography and geography of Christian County is a handicap to its society interest as a county organization. Yet this does not keep them from enjoying the benefits of other societies. Being in L shape, with railroads running to Springfield and no direct line of communication connecting its northwestern and southeastern parts and an unfriendly topography, this county does well to maintain a county organization in a fair working order. Polk County Society has begun anew and we are looking forward to its becoming one of the best societies in the state. This county has a number of able physicians that are either in the society or are eligible to membership, and with the enthusiasm now aroused we predict a bright future for this society. Barry County Society elected new officers Dec. 10, 1912. Considerable enthusiasm was manifested at the meeting, and it is to be hoped this interest will grow greater throughout this year. The Lawrence-Stone County Medical Society claims never to have had a really dull meeting. It meets at Aurora except when invited to other accessible towns of the two counties. Rotation in office has always been practiced in the election of officers. Greene County Society is much the largest and perhaps the most active society in the Twenty-Eighth District. Its public health work has been of value to Springfield and to Greene County, and its counsel is sought by the Commercial Association relative to improving the sanitary condition of the city. In upholding ethics and discouraging the practice of irregular medicine this society has shown a highly commendable spirit. Several suits have been brought against members in the Twenty-Eighth District for malpractice. In every case to which our attention has been called the complainant had no just ground for action. An irregular and sometimes disreputable doctor and a clientless "snitch" lawyer are usually more responsible for the action than the supposed injured patient.

Dr. Craig, Secretary of the American Medical Association, stated the opinion of the A. M. A. in this regard, that it was considered the adoption of fee bills by county societies was liable to put them in false light with the public. Dr. McConkey stated a county in his district had established a fee bill eighteen months before which had been satisfactory; in his own county they had an annual business meeting where the doctors talked over the matter of fees to be charged and that this had a good effect. Dr. Welch stated in his county it was not found practicable for the entire county, but in his own community an agreement had proved successful. Dr. Breuer, Twenty-Sixth District, reported counties doing well except Dallas where an osteopath had been made secretary of the society, resulting in refusal of a charter; stated that he and two others in his county

had agreed to raise prices, and it was satisfactory; that if county societies passed fee bills which could not be enforced, the physicians could agree on rate and it was not necessary for the society to make the fee bill. Dr. McComas, Ninth District, stated all societies organized; in his (Boone) county they had successfully prosecuted chiropractors. Dr. Cannon, Twenty-Second District, reported all counties organized but one, which had been organized in conjunction with Cape Girardeau; had driven out a so-called cancer cure faker; no fee bill, no tendency to cut prices.

Dr. McConkey moved that the chairman of the Executive Committee, the Secretary and Dr. Murphy be made a committee to draft resolutions commending the newspapers which had given assistance by their editorials. Motion seconded and carried.

The chair called attention to the President's message which had been referred to the Council. He read the recommendation relative to raising the dues one dollar per member a year. Dr. Cannon moved the recommendation be approved, seconded by Dr. Allen. The motion carried unanimously.

The chair read the recommendation relative to making members of state associations also members of the A. M. A., and make those who pay \$5.00 for *The Journal of the A. M. A.*, fellows of the A. M. A. The recommendation was approved.

The recommendation to change the name of Committee on Public Policy and Legislation, to the Committee on Health and Public Instruction, was adopted by the Council.

The Council then took up the recommendation that the Program Committee, or Committee on Scientific Work, consist of three members to be appointed by the President or the Nominating Committee, the Secretary of the State Association to be a member of the committee. The recommendation that the committee be appointed by the President was approved by the Council.

The Council, by unanimous vote, declared its belief that the privilege to practice medicine in this country should be acquired by Dr. Frederick Friedmann of Berlin, Germany, in the same manner as American citizens acquire that right and the action of the Executive Committee in protesting to our senators against Dr. Friedmann acquiring this right in any other manner was indorsed by the Council.

The purchase of an American flag to be displayed at the annual meetings was approved by the Council.

The Council approved the recommendation that an investigation be made of commissions paid physicians by instrument and other firms, and directed the Publication Committee to investigate whether any commissions are paid to physicians by such firms. The Council furthermore instructed the publication committee to exercise a close scrutiny of all advertisements offered to our JOURNAL.

Dr. McComas moved that a woman member be made an auxiliary member of the Committee on Health and Public Instruction. Seconded and carried.

Dr. Breuer moved that a vote of thanks be tendered the members of the legislature who assisted in defeating bills not in the interests of the public health. Seconded and carried.

Dr. Breuer moved that \$1,000 be transferred from the general fund to the defense fund, conditioned on the annual assessment being raised, and that if necessary the Executive Committee of the Council shall have the right to transfer from the defense fund to the general fund such sums as may be necessary. Seconded. After a discussion Dr. Breuer amended his motion to read \$750. Seconded and carried.

On motion adjourned to 12 noon on Wednesday.

Wednesday, May 14, 1913

The Council convened at 12 noon, eleven members present.

The Auditing Committee reported having examined the Treasurer's books and found them correct.

Dr. Murphy, chairman of the committee to hear the physicians from Lafayette County, reported that the committee had listened to the representatives of both sides of the controversy and had accumulated a mass of evidence. The committee desired the Council to hear the evidence in brief and take action.

Upon invitation, Dr. W. A. Braeklein, for the Lafayette County Medical Society, addressed the Council. He was followed by Dr. J. J. Fulkerson and Dr. A. J. Chalkley. The Council deliberated on the question and after a free discussion a motion prevailed that the charter of Lafayette County Medical Society be revoked.

The chairman was instructed to take the necessary steps for calling together all eligible physicians in Lafayette County to establish a county society to become affiliated with the State Association.

The following officers were elected for the ensuing year: Chairman, Dr. F. J. Lutz; Secretary, Dr. E. J. Goodwin; Treasurer of the Association, Dr. J. Franklin Welch; Secretary of the Association and Editor of *THE JOURNAL*, Dr. E. J. Goodwin.

Dr. Murphy moved that the present Executive Committee of the Council be continued for another year. Seconded and carried.

Dr. Dixon moved that the present Publication Committee be continued for another year. Seconded and carried.

On motion adjourned *sine die*.

MINUTES OF THE GENERAL SESSION

Tuesday, May 13, 1913—Evening Session

The meeting was called to order by Vice-President, Dr. H. S. Crawford, at 8:10 p. m., in the auditorium of the St. Louis Medical Society. Dr. Crawford introduced the President, Dr. Robert M. Funkhouser. St. Louis.

Dr. Funkhouser read the annual address of the President, his subject being "Eugenics."

Dr. A. H. Hamel, St. Louis, delivered the oration on medicine.

Dr. F. G. Nifong, Columbia, delivered the oration on surgery.

Wednesday, May 14, 1913—Morning Session

The general session was called to order at 9:15 a. m., the President, Dr. R. M. Funkhouser, in the chair.

The following papers were read:

SYMPOSIUM ON HABITUAL CONSTIPATION

"The Physiology of Defecation and the Etiology of Constipation." by Dr. Wm. H. Stauffer, St. Louis.

"Is Chronic Constipation a Factor in the Various Forms of Chronic Eczema, Urticaria, Acne Vulgaris, Acne Rosacea and Other Forms of Skin Disease," by Dr. J. P. Kanoky, Kansas City.

"Diet and Constipation," by Dr. J. M. Bell, St. Joseph. (Read by permission by Dr. C. W. Fassett, St. Joseph.)

"Drugs and Constipation," by Dr. O. B. Hall, Warrensburg.

"X-Ray Investigation of Constipation," by Dr. E. H. Skinner, Kansas City.

"Habitual Constipation, Mainly with Reference to Its Constitutional Effects," by Dr. Woodson Moss, Columbia. (Read by title.)

"Surgical Procedures in Constipation," by Dr. A. E. Hertzler, Kansas City.

Discussion by Drs. T. F. Lockwood, E. H. Thrailkill, R. H. Barnes, Frank Hinehey, J. B. Wright, W. G. Moore, C. Lester Hall; Drs. Stauffer and Kanoky in closing.

"The Prophylaxis of Poliomyelitis," by Dr. E. W. Saunders, St. Louis.

Discussion by Drs. C. R. Woodson, W. H. Schutz, Kansas City; Dr. Saunders in closing.

Wednesday, May 14, 1913—Evening Session

The meeting was called to order by the President, Dr. R. M. Funkhouser, at 8:15 p. m., in the auditorium of the St. Louis Medical Society.

Dr. M. A. Bliss, St. Louis, introduced Miss Margaret McKinley, St. Louis, registered nurse.

Miss McKinley demonstrated the conditions in many of the alms houses in the state by lantern-slide pictures of photographs taken during an investigation by Miss Forrester.

Dr. M. P. Overholser, Harrisonville, formerly superintendent of State Hospital No. 3, at Nevada, read a paper on "The Prevention of Insanity; Our State Hospitals for the Insane and Their Management."

Dr. M. A. Bliss, St. Louis, read a paper entitled, "The Present Situation in the State Hospital Service in Missouri."

These papers were discussed by Drs. W. F. Kuhn, Kansas City; C. R. Woodson, St. Joseph; J. F. Harrison, Mexico.

St. Louis Medical Society Auditorium, May 15

The general session was called to order by the President, Dr. R. M. Funkhouser, at 10:03 a. m.

The President announced the first order of business was the election of president.

The chair appointed the following tellers: Drs. Duckett, Craig, E. H. G. Wilson and Dyer.

The ballot was cast with the following result: Dr. E. H. Miller, Liberty, 73; Dr. Geo. W. Vinyard, Jackson, 35; Dr. W. J. Ferguson, Sedalia, 25; Dr. T. A. Coffelt, Springfield, 4; Drs. Dock, Hertzler and Lockwood, 1 each.

It was moved that the nomination of Dr. Miller be made unanimous. Seconded.

Dr. Elam moved as a substitute that we proceed to cast the elective ballot as this ballot was merely the nominating ballot. Seconded.

Dr. Jackson moved as an amendment that the rules be suspended and the Secretary be instructed to cast the vote of the Association for Dr. Miller. Seconded and carried.

The Secretary: It gives me great pleasure to cast the ballot of the Association for Dr. E. H. Miller for President.

The President appointed Dr. Wm. Nifong and Dr. C. Lester Hall to escort Dr. Miller to the rostrum.

The President, in introducing Dr. Miller, said: I take great pleasure in presenting Dr. E. H. Miller whom you have elected your President. I hope you will treat him in the same manner, with the same consideration, cooperation and courtesy that you have extended to me during the year. Your President cannot do anything toward the advancement of the work connected with his position as president unless he has behind him "the men at the guns." It will not be necessary to bespeak your consideration further.

Dr. Miller: Some thirty-nine years ago when I graduated in St. Louis, I thought then it was the crowning act of my life. Visions of pleasure, pain and remuneration came before me until I felt I was on the very pinnacle. That was thirty-nine years ago and again that is how I feel this morning. Born in Missouri, in the county in which I now practice; thirty-nine years in the harness; to-day I am at the head of an institution that I have admired ever since I received my diploma and still am proud of the men that form the Missouri State Medical Association. I hope, with your cooperation and assistance, to make the coming year better than ever before.

Dr. Funkhouser: Before resigning this gavel I want to make a few remarks in regard to the obliga-

tions that I am under to the officers of this body and to each individual member; and particularly do I wish to compliment and express my obligations to the Secretary. The Secretary has been overworked. I know whereof I speak. I do not believe a single day has passed—possibly two or three—in which I have not been here in this building, in the room of the Missouri State Medical Association. We have worked in harmony and I know that he has had an eye single to the good and to the advancement of this Association. I believe he has had no axes to grind. He has been kind and courteous to everyone and yet attempts have been made to take advantage of his courtesy and his friendly feeling. At this time I want to ask a rising vote be given him as an expression of our appreciation of the work done by Dr. Goodwin.

The members rose en masse and called on Dr. Goodwin to speak.

Dr. Goodwin: As a rule workers are not speakers and I have always tried to keep the members speaking. Whether I have worked or not, I don't know, because the service has been a great pleasure to me; but I shall keep trying.

The President: The next order of business is the election of the orator on medicine.

Dr. W. S. Allee, Olean: I suggest the name of a member who has been a worker; a man of whom we are all proud. The members of this Association who come from his territory want to see him selected for this honor and I have been requested by them to place his name in nomination. I can vouch for him personally. He has been a member of this Association for seventeen years and I think within those seventeen years he has been on the program sixteen times. This shows he is a worker. I want to nominate Dr. T. F. Lockwood, of Butler, for orator on medicine.

Dr. C. R. Woodson moved the nomination be closed and that the Secretary be instructed to cast the ballot for Dr. Lockwood for orator on medicine. Carried.

Secretary: It gives me great pleasure to cast the ballot of the Association for Dr. T. F. Lockwood, of Butler, for orator on medicine for next year.

The chair announced that nomination for orator on surgery were in order.

Dr. A. R. Kieffer: I suggest a man, a worker in the Association and one who has been a member as long as any member here; one well known to everybody; he has been on the program a great number of times and he is probably entitled to higher honors, but he has a defect which interferes with his being the presiding officer. This does not effect his value as orator on surgery, however, and I suggest the name of Dr. T. E. Potter, St. Joseph. Seconded.

Dr. C. R. Woodson moved the nomination be closed and that the Secretary be instructed to cast the ballot of the Association for Dr. Potter as orator on surgery. Seconded and carried.

Secretary: I am glad to announce the election of Dr. T. E. Potter, St. Joseph, as orator on surgery.

The scientific program was taken up and the following papers read:

Thursday, May 15, 1913—Morning Session

The scientific program was taken up and the following paper read:

"The Physician, the Patient and the Surgeon," by Dr. J. C. Boone, Charleston.

Discussion by Drs. A. S. J. Smith, W. S. Allee, W. T. Reynolds, W. T. Elam, Robert M. Funkhouser, C. Lester Hall, E. H. G. Wilson; Dr. Boone closing.

"Perinephritis," by Dr. Henry Jacobson, St. Louis. Discussion by Drs. W. T. Elam and J. N. Jackson; closed by Dr. Jacobson.

On motion adjourned until 1:30 p. m.

Thursday, May 15, 1913—Afternoon Session

The general session was called to order at 2 p. m., the President, Dr. E. H. Miller, in the chair.

The scientific program was taken up and the following papers read:

"Some Considerations of the Course of Specific Urethritis in the Male and Their Bearing on Treatment," by Dr. H. McClure Young, St. Louis.

"Surgical Responsibility," by Dr. C. H. Fulton, Springfield. (Read by title.)

"Some Problems Confronting the Sanitarian," by Dr. H. L. Reid, Charleston.

Discussed by Drs. M. A. Bliss, Wm. Porter, A. H. Hamel, James, Stewart, W. G. Moore, E. L. Hume and others; Dr. Boone closing.

"Arteriosclerosis in Relation to Certain Ocular Diseases," by Dr. Elsworth Smith, St. Louis.

Discussion by Drs. J. W. Charles, J. L. Boogher, F. R. Fry, George Dock, E. Saxl, C. Barek; Dr. Smith closing.

"The Draeger Pulmotor with Lantern-Slide Demonstrations," by Dr. W. R. Hewitt, St. Louis.

On motion adjourned *sine die*.

MINUTES OF THE MEDICAL SECTION

Aschenbroedel Club, Wednesday, May 14, 1913

The meeting was called to order at 2 p. m., by the chairman of the section, Dr. C. H. Neilson, St. Louis. A motion was made and carried that each essayist be limited to fifteen minutes for reading his paper. After a short discussion it was ruled that if a few minutes longer were required by an essayist the time would be allowed. The chair ruled that the discussions would be limited to three minutes, no one being allowed to speak twice on the same subject.

Dr. Scott P. Child, Kansas City, read a paper entitled, "Arterial Hypertension."

Discussion by Drs. Beck, Ellsworth Smith, Sloan, Glasgow; Dr. Child closing.

Dr. E. H. Miller, Liberty, read a paper entitled, "Epidemic Puerperal Eclampsia, with Report of a Case."

Discussion by Drs. Lockwood, Gray, Beck, Downing, Samuels, Seba, Briegleb, Grace; Dr. Miller closing.

Dr. T. A. Coffelt, Springfield, read a paper entitled, "The Relation of Refraction to the Practice of Medicine."

Discussion by Drs. Klingner, Carl Barek; Dr. Coffelt closing.

Dr. Briegleb moved that more time be allowed Dr. Carl Barek for the discussion of Dr. Coffelt's paper. Seconded. Chair ruled the motion out of order as there were other papers to come.

Dr. Jules M. Brady, St. Louis, read a paper entitled, "Alimentary Intoxication and Enteric Infection in Infancy."

Discussion by Dr. A. S. J. Smith; Dr. Brady closing.

Dr. G. Wilse Robinson, Kansas City, read a paper entitled, "Anxiety Neuroses and Their Treatment."

Discussion by Drs. Kuhn, Woodson; Dr. Robinson closing.

Dr. John D. Seba, Bland, read a paper entitled, "Bacterin Therapy."

The chair announced that nominations for officers for the ensuing year were in order.

Dr. John D. Seba, Bland, was nominated for chairman of the section, as was also Dr. J. P. Dunigan, Sullivan.

On motion the election was by rising vote: Dr. Seba fifteen and Dr. Dunigan three. Dr. Seba was declared elected.

On motion duly seconded and carried, the Secretary cast the vote of the section for Dr. Dunigan for vice-chairman.

On motion of Dr. Woodson, Dr. O. H. Brown, St. Louis, was retained as secretary for the coming year.

On motion the section adjourned *sine die*.

MINUTES OF THE SURGICAL SECTION

Wednesday, May 14, 1913

The surgical section was called to order at 1:30 p. m., the chairman, Dr. W. T. Reynolds, presiding.

The following papers were read:

"Gauze or Rubber Tubing for Peritoneal Drainage?" by Dr. H. J. Jurgens, Edina.

Discussion by Dr. A. R. Kieffer, T. E. Potter, T. J. Beattie; Dr. Jurgens closing.

"Primary Carcinoma of the Appendix," by Dr. Louis Rassieur, St. Louis.

Discussion by Drs. Ernst Jonas, T. J. Beattie, George Gellhorn, A. R. Kieffer; Dr. Rassieur closing.

"The Rectal Plug," by Dr. Rollin H. Barnes, St. Louis.

Discussion by Drs. E. H. Thraillkill, F. Reder, T. E. Potter, T. J. Beattie, Ernst Jonas, H. J. Jurgens; closed by Dr. Barnes.

"Operative Procedure in the Treatment of Uterine Displacements," with lantern-slide demonstrations, by Dr. John McH. Dean, St. Louis.

Discussion by Drs. H. S. McKay, C. Lester Hall, George Gellhorn, F. Reder, Frank Hinchey, T. J. Beattie, A. R. Kieffer; closed by Dr. Dean.

"Diagnosis and Postoperative Case of Acute Surgical Conditions," by Dr. F. W. Bailey, St. Louis.

Discussion by Dr. W. B. Dorsett; closed by Dr. Bailey.

On motion of Dr. J. N. Jackson, duly seconded and carried, the officers of the section were reelected for the ensuing year.

On motion adjourned *sine die*.

REPORT OF THE SECRETARY

The paid up membership for 1913 is 2,583. This is an increase over 1912 of 56. In 1912 I reported an increase of 180 paid-up members over 1911. It is therefore encouraging to all of us that I can report a further increase of membership for 1913.

During the past twelve months I have visited seven counties. Two counties were organized, namely, Crawford with ten members, and Texas with fifteen members. Franklin, Iron and Dunklin Counties have revived their activities, entirely through the efforts of the members themselves. There are still a number of counties, at one time well organized, which have practically ceased to exist as county societies. Some of these could be revived. I have been prevented from visiting these counties and have declined several invitations from other societies because the funds of the Association did not permit the expense of the trip.

The new superintendent of insurance, Mr. Chas. G. Revelle, has revoked the former superintendent's ruling so that physicians may again be insured against damages for malpractice by commercial companies. I believe our members, however, will find the defense feature of the Association of more value to them than commercial companies, and far less expensive.

Much of the clerical work and correspondence for committees has been performed in the secretary's office as in the last two years. The detailed work of the Association increases from year to year, but there has been no increase in the funds to defray the expense for this increase of labor, hence officers and members of committees have been forced to pay their own expenses when traveling and working in the interest of the members and of the Association.

Several county societies have made strenuous efforts to drive out quacks, and have asked the secretary if the Association furnished financial assistance in this direction. Nothing of that sort has been attempted by the Association, but it should be given serious consideration and every inducement extended the component societies to prosecute violators of the medical laws.

The reports of the committees were printed and distributed to the delegates before the date of the meeting and copies are on hand for use at this time.

As instructed at a previous meeting I have taken charge of the exhibits and excluded everything not complying with our rules and regulations.

The proposition to amend the constitution and by-laws of the A. M. A. so that the members of constituent state associations shall be *ipso facto* "members" of the A. M. A. and that members contributing \$5.00 annually shall be "fellows" of the A. M. A., should receive the attention and our delegates instructed.

In October, 1912, your secretary attended a meeting of the state secretaries in Chicago, called by the Board of Trustees of the A. M. A. Various questions on organization work were discussed, as well as plans for systematizing the relationship of the constituent state associations to the A. M. A. Another meeting will probably be held in the fall of this year. The A. M. A. paid the expenses of the secretaries attending the meeting. The meeting resulted in a better understanding of the objects and purposes of organized medicine and of the relation of the state association to the A. M. A.

During the year 270 new members were admitted; twenty reinstated; four resigned; twenty-two transferred or moved out of state; nine dropped for non-payment of dues; thirty-two died; one suspended; one expelled. There are 430 members delinquent for 1912, a large number of whom will pay before the end of the year; 103 members are delinquent for 1912 and 1913, some of whom will pay up, making the total membership 3,116.

E. J. GOODWIN, *Secretary*.

TREASURER'S REPORT

RECEIPTS

1912		
May 15	By balance on hand.....	\$3,292.89
1913		
May 1	By advg. in JOURNAL.....	2,833.77
May 3	Interest on daily balance..	24.06
	By assessments of county societies	6,310.00
		<u>\$12,460.72</u>

DISBURSEMENTS

May 1	To defense fund.....	\$1,000.00
	Councilors' expense.....	59.11
	Committee expense.....	291.84
	Treasurer's office expense..	246.65
	Salaries	3,180.00
	Office rent.....	150.00
	JOURNAL expense.....	2,183.33
	Printing and stationery...	394.50
	Reporting annual meeting	64.00
	Postage	462.98
	Miscellaneous expense.....	347.14
	Extra clerical service.....	364.88
		<u>\$8,744.43</u>
	To balance on hand.....	3,716.29
		<u>\$12,460.72</u>

DEFENSE FUND RECEIPTS

1912		
May 15	Balance on hand.....	\$2,121.11
May 25	Transferred from general fund	1,000.00
1913		
May 1	Interest on daily balance..	87.18
		<u>\$ 3,208.29</u>

DISBURSEMENT

May 4	To attorney's fees in five malpractice suits.....	\$ 425.00
	To Balance on hand.....	2,783.29
		<u>\$ 3,208.29</u>

REPORT OF PUBLICATION COMMITTEE

We, your publication committee, beg to submit the following report:

During the past year we have continued the careful selection of all advertising matter, and have attempted in every way consistent with good business policy to uphold the standard set by THE JOURNAL for the previous year.

We still continue the arrangement made with the American Medical Association to print THE JOURNAL, and we find that this arrangement is very satisfactory in every way and saves money for the Association. The A. M. A. is taking special interest in the advertising department of the state journals. The Board of Trustees is contemplating the establishment of an advertising bureau in the Chicago office for the purpose of assisting state journals in obtaining advertisements.

Your editor has been conscientious and faithful in every way, guarding at all times the interest of the members of the Association, and ready to speak out editorially in plain language when the interest of the physician or the health of the public was at stake.

We desire to thank the membership for their loyalty to THE JOURNAL, and assure you that with your continued support THE JOURNAL will grow in efficiency and usefulness.

Below we give an account of the income and expenditures for the year:

By amount from advertising in Journal, May 1, 1912, to April 30, 1913.....	\$3,397.88
To printing of twelve issues, May 1, 1912, to April 30, 1913.....	\$2,051.70
Freight and hauling.....	143.34
Postage	366.35
	<u>2,561.39</u>
Net gain.....	<u>\$836.49</u>

W. H. BREUER, *Chairman*;
M. A. BLISS,
SCOTT P. CHILD.

REPORT OF COMMITTEE ON EXPERT TESTIMONY

Dr. C. R. Woodson, for the Committee on Medical Expert Testimony, submitted the following report and resolutions adopted by the American Medico-Psychological Association on the question of medical testimony, as the report of his committee:

In the torrent of comment and contention which has long been raging about medical expert testimony, there has been thus far no concerted expression of opinion from the alienists of this country, who are the chief targets for the adverse and wide-spread criticism that prevails on this subject. It is time, therefore, that the position of this Association on this question in its various aspects, and particularly as it relates to the insanity defense in criminal cases, should be clearly defined, and the difficulties under which the alienist labors and the injustice done him made plain.

This is the tenor of the resolution which led to the appointment of your committee, and in this report and the accompanying resolutions we have undertaken the very difficult task of so presenting the issue that it shall represent the united opinion of this Association in so far as it bears on the attitude and position of its members.

The number of alienists who figure in homicide trials or for that matter in medicolegal cases of any description, is insignificant when compared with the cloud of medical witnesses giving expert testimony in cases arising from personal injury which are largely responsible for the flood of litigation which is overwhelming our courts. Many of these witnesses also are general physicians whose opinions are not based

on special accomplishment in any single branch of medicine. Therefore, there necessarily must be far more opportunity for defective medical testimony to be offered in such cases than during criminal trials in which the question of insanity is involved.

Nevertheless, it is the physician in mental diseases whose evidence has to bear the brunt of public criticism and abuse because of the importance of the issue and the publicity given to details of murder trials of which his testimony is a conspicuous feature. The physician who is called to testify on purely medical or surgical questions is brought into no such prominence. On the other hand, all eyes are on the alienist, and so great is the indignation and desire for retaliation on the murderer that except in the most obvious cases of insanity any medical testimony which favors irresponsibility is sure of hostile scrutiny from the start, no matter how sound and unbiased it may be.

The alienist on the witness stand faces, therefore, a great responsibility, and a single dishonest physician may bring more discredit on himself and his medical brethren because of this prominence than a dozen unscrupulous medical witnesses in accident cases. That this Association is fully alive to this responsibility is plainly shown by the number of its members who have long taken active part in directing attention to the "evils" of medical testimony in court and in seeking their remedy.

The dangers to the cause of justice that are supposed to lie in the insanity defense for crime are without question greatly exaggerated. Too much has been taken for granted and little or no inquiry made as to the actual results of its operation.

There is no way by which we can approach a more accurate estimate of the number of homicidal criminals who have escaped their just deserts by this means than by ascertaining how many sane criminals of this class have been committed as insane to hospitals for the insane in a given period. In reply to inquiry on this point, the superintendents of seventy-five out of 108 hospitals in this country and Canada, with a population of over 83,230 inmates, report but seven criminals who had been charged with homicide who had been improperly adjudged insane and sent to hospitals for the insane during the past two years. Superintendents of special institutions for the criminal insane report that very few criminals of any kind are wrongly adjudged insane and committed to their institutions—not a dozen in twenty years, according to Dr. Lamb of the Matteawan institution for this class—while the period of hospital residence of discharged cases shows that they underwent a longer confinement as insanity patients than would have followed had the same men been convicted and sent to prison.

The real injustice in this matter is that the insanity defense is not by any means employed as often as it should be. In other words, much more harm results from the lack of expert testimony than from its defects. There are far more instances of the commitment of insane persons to prison for want of preliminary examination and recognition of their mental condition than there are of the commitment of sane criminals to hospitals for the insane. Many so-called criminals are convicted and sent to prison only to be found insane and transferred to the asylum for criminal insane. Such patients are wholly out of place in prisons, where they are not only stigmatized as felons and deprived of the proper and humane care that is their due, but are made worse by prison discipline, while the difficulty of enforcing prison rules in their cases greatly interferes with proper administration. Dr. Allison has reported that 53 per cent. of 179 insane persons under his charge at the asylum for the criminal insane at Matteawan who had committed murder were received from prisons to which they had been

sentenced for life. Their histories and the character and course of the disease showed that at least 40 per cent of such convicted cases were insane at the time the crime was committed. In many instances the fact of their insanity was not recognized at the time of their trial, but in others the plea was set up and failed. Wherever this matter has been made the subject of inquiry this has been the story in all large prisons and institutions in which the criminal insane are received, both in this and in foreign countries. The lowest estimate from authoritative sources, and a most conservative one, is that ten insane persons are made convicts to one malefactor who escapes punishment on the plea of insanity.

In the important matter of the responsibility of the insane for criminal acts we hold that it is not the province of the alienist in the medicolegal cases to pass upon the legal or criminal responsibility of insane persons. That is a question for the judge or jury to decide.

A medical man giving expert testimony has only to say whether or not in his opinion insanity is shown by the evidence. It is admissible, however, to call attention to the fact that insanity in the medical sense does not imply total irresponsibility.

The capacity of an individual to distinguish between right and wrong as a test of legal responsibility is in direct conflict with the laws of Nature and hence unscientific and false in its application to the mentally unsound. The real questions for the jury to determine in cases of alleged insanity in criminal trials are:

1. Did the defendant at the time of the alleged crime have sufficient mental capacity to rationally appreciate the nature and consequence of the act he was committing, and if so, had the sufficient power of will to enable him to choose between doing and not doing it?
2. If he had lost the power of choosing with reference to the particular act, was the loss due to disease and not to "heat of passion," intoxication or self-induced temporary mental disturbance?

The chief obstacle to accurate expert testimony encountered by the physician is the difficulty—often the impossibility—of obtaining all the important evidence that is procurable on both sides of the case. Without this an unqualified opinion of real value cannot be given except where insanity (for example) of the accused person is plainly apparent. We shall, of course, be told that on the contrary even the medical man who only forms his opinion after he has examined the accused person and has heard all the evidence submitted in court, will still be biased in favor of the side which employs him, and that there lies the whole trouble. To this we can only oppose our conviction that with the majority of physicians the professional instinct outweighs partisan and mercenary considerations, and that when they have all the data for a diagnosis at hand they will give as accurate and impartial an opinion on the witness stand as they would in any case occurring in their daily practice. Were this not so, we should be forced to conclude either that medical men yield more readily to pecuniary temptation than members of the other professions or that most men whatever their calling and standing in the community are not radically honest where a fee is concerned.

True reform in medical testimony does not in our opinion lie in a radical change in present methods of legal procedure. It is in the hands of the medical profession, and if physicians would cooperate in refusing to testify unless free access to all obtainable evidence on both sides should be forthcoming we should hear little of the shortcomings of the medical expert.

It frequently happens that the medical witness is debarred from making any examination whatever of the person accused or questioned. Counsel for the

defendant may decline to have his client examined and will be sustained by the court. Not only this, but the medical man on one side may examine the person, while the same privilege is denied the physicians called on the other.

Sometimes we are allowed neither a personal examination nor the evidence on which to base our opinion, but are obliged to answer only a hypothetical question, a procedure which can bear no comparison with either as a means of ascertaining the truth. In spite of the utility and justice of the hypothetical question, in the opinion of the legal profession, it can never find favor with medical witnesses. As a rule, it is not at all what it represents to be, for to quote Ray—that master of medical jurisprudence—if the case put to the jury is precisely what appeared in evidence it is quibbling to call it a hypothetical case. If, on the other hand, a genuinely supposititious case is put to the expert, the less it resembles the actual case the less it will enlighten the jury. However, nobody supposes that the hypothetical cases stated by counsel always represent cases that have actually occurred, for it is well understood that they may be merely a collection of such particulars as best suit the counsel's purpose. A true reform would be to confine the expert to the case in hand as revealed by the evidence and debar him entirely from giving opinions on hypothetical cases. But although there are signs that the hypothetical question is less generally utilized than was formerly the case, we have little expectation that it will disappear from court practice. With persistence, however, we may reasonably expect that in its presentation to the medical witness the essential evidence on both sides will be included and a source of much humiliation to the testifying physician and deception of the jury be removed.

The advantages to come of consultation by the medical witnesses on both sides of a case are admittedly great, because directly in line with medical methods where a careful diagnosis is to be made and the real condition of the patient ascertained. We are therefore in hearty sympathy with the familiar sentiments of Sir James Stephens, who says:

"If medical men laid down for themselves a positive rule that they would not give evidence unless before doing so they met in consultation the medical men to be called on the other side and exchanged their views fully, so that the medical witnesses on the one side might know what was to be said by the medical witnesses on the other, they would be able to give a full and impartial account of the case that would not provoke cross-examination. For many years this course has been invariably pursued by all the most eminent physicians and surgeons in Leeds, and the result is that in trials at Leeds (where actions for injuries in railway accidents and the like are very common) the medical witnesses are hardly ever cross-examined at all, and it is by no means uncommon for them to be called on one side only. Such a practice, of course, implies a high standard of honor and professional knowledge on the part of medical witnesses, but this is a matter for medical men. If they steadily refuse to act as counsel and insist on knowing what is to be said on both sides before they testify, they need not fear cross-examination."

The bar has its duty as well, and should oftener take the initiative in securing such consultations. The prosecution and defense should oftener come together and agree on the experts to be appointed, who should then conjointly examine the prisoner, collect all obtainable evidence and submit their report to counsel on both sides. Mercier in his work on criminal responsibility cites a famous case recently tried in Massachusetts in which this method was pursued with most satisfactory results, the counsel on both sides agreeing to abide by the decision of the commission. "This," he says, "seems an eminently satisfactory way of deter-

mining this difficult question. The case is not withdrawn from the consideration of a court of justice, but is tried in the ordinary way, the only difference being that the jury have not to estimate the value of conflicting opinions, but are guided to a direct conclusion by a unanimous medical report. . . . The consultation of experts could scarcely fail to approximate their opinions, even if they eventually differed, and I think the practice is well worthy of a trial."

We also strongly favor the appointment of commissions wherever possible. Cases of crime of minor degrees in which the question of insanity is raised have long been passed on and their proper disposal effected by commissions appointed by courts, and the practice is increasing. There is ample evidence to show that capital cases in which the plea of insanity is raised may also be passed on by commission with equally good results and with full recognition of their graver aspects. It is a frequent practice in Massachusetts to refer such questions to a commission of alienists, and the results have been most satisfactory. The chief objection to the commission is that no body of physicians is able to elicit from witnesses testimony that in amount and importance will equal that which can be brought out by direct and cross-examination on the witness stand by able lawyers. There is much truth in this, but it is equally certain that the counsel's unfamiliarity with mental disease often leads him to miss or neglect vital points evidencing insanity or its absence which quickly occur to the alienist, and which are far more accessible in private than in the publicity of the court room. A commission, moreover, often saves the expense and other disadvantages of a trial, and should the case come to trial, the testimony of the members of the commission would carry especial weight.

But even if the foregoing methods could always be employed, the important requisite of a thorough examination of the prisoner might still be wanting. This is not unfrequently the case where the physician's opportunity for observing him is confined to occasional visits to the jail, and would be wholly obviated if a period of constant medical observation could be substituted for it. We are therefore strongly in favor of hospital observation in such cases pending the determination of the subject's mental condition. This method has long been in very satisfactory operation in Maine, New Hampshire and Vermont, and is taking root in Massachusetts under recent enactments. It has many advantages. The daily and hourly habits and conduct of the person are under the close and constant observation of trained physicians and nurses. This is invaluable in cases having concealed delusions who may refrain for weeks and months from unburdening their minds to the examiners. Persistent feigning also can be far more easily and quickly detected under these conditions, owing chiefly to the difficulty the offender experiences in keeping up the pretense of insanity uninterruptedly and consistently when he is closely watched night and day. But it is especially advantageous in notorious capital cases. Here removal of the person from public notice to a hospital for observation is quite certain to be effective in silencing the popular clamor and sensational reports that usually attend such cases. The delay it involves also tempers public opinion, as does the evident intent of thorough investigation that is shown in a term of hospital observation. There can, moreover, be no suspicion of bias attaching to the unpaid opinion of state medical officers, and the state is also saved considerable expense. Moreover, the testimony of a hospital physician when based on such abundant opportunity for study of the case usually carries more weight with court and jury than that of other medical witnesses. Finally, under this method shorter trials are the rule.

Much, we believe, would be gained by the restoration of the common law practice wherever it has been abolished which allows the judge to advise the jury in the decision of complicated questions of fact and to aid them in weighing and sifting evidence that is of a scientific or technical nature. Such a provision would be especially applicable to questions of insanity.

There are also more purely ethical questions which are of decided importance to the medical witness and the repute of the profession. It is, for example, a questionable practice for the physician to take active part in a medicolegal case by advising with counsel in open court. By so doing he exposes himself to the charge of undue bias, his testimony is regarded as partisan by court and jury, and his attitude is out of keeping with professional dignity.

The acceptance of a fee contingent upon the outcome of a case is a most objectionable and indefensible practice. An unbiased, independent opinion is practically impossible under these circumstances, and the physician becomes an active partisan at once. His testimony is also valueless if he is forced to admit that his compensation depends on the result of the case.

It is very desirable to establish some standard of qualification for the medical expert, especially in cases involving the question of insanity. In no other branch of expert work is special training and experience more necessary in forming opinions of real value, and yet it is a common occurrence in most states for physicians with little or no special knowledge of or practice in mental disease to qualify as experts. A step in this direction might, we believe, be made by the establishment in the various states of bodies of official experts designated by the higher courts, any of whom could be called on to testify as experts by either party to a civil or criminal action without, however, limiting the right of parties to call other expert witnesses as heretofore. This plan, although falling far short of the desired end, should at least tend in the long run to lessen the number of incompetent medical experts.

In conclusion, we offer for adoption the following resolutions which shall represent the attitude of the American Medico-Psychological Association on the question of medical testimony as it affects the alienists of this country:

Resolved: 1. That the proved rarity of wrong acquittals on the ground of insanity is the strongest evidence that the abuse of the insanity plea in criminal cases has been unwarrantably exaggerated.

2. That the insanity plea is not by any means raised as often as it should be, to prevent the frequent miscarriage of justice arising from the conviction and imprisonment of insane persons whose true mental condition has not been recognized.

3. That the abuses which have crept into the method of presenting medical expert testimony have been largely the result of established legal tests and procedures, although their correction does not require radical change in the laws.

4. That inaccessibility of the evidence on both sides of the case is the chief cause of defective medical testimony.

5. That whenever possible the medical witness should not testify unless he has had an opportunity to make both a mental and a physical examination of the person in whose behalf the plea of insanity is raised.

6. That we consider the hypothetical question as ordinarily presented to be unscientific, misleading and dangerous to medical repute, and that the evidence on both sides should always be included in its presentation to medical witnesses.

7. That in all criminal cases absolutely equal rights should be accorded the medical witnesses for both the prosecution and the defense for the examination of the person alleged to be insane.

8. That in our judgment the judiciary should by legal enactment be allowed more latitude in enlightening the jury and enabling it to comprehend the nature and meaning of the medical testimony laid before it.

9. That we recommend as advisable the adoption wherever possible of the so-called Leeds' method of preliminary consultation by medical witnesses on both sides of the case as to its status.

10. That we advocate a freer use of appointments of commissions by the court.

11. That a period of hospital observation of all persons committing crimes in whose defense the plea of insanity has been raised is by far the best method yet devised for securing impartial and accurate opinions, silencing popular clamor, avoiding prolonged and sensational trials and saving expense to the state; also that we advocate the enactment in every state of laws similar to those of Maine, New Hampshire, Vermont and Massachusetts, providing that such persons may be committed by the court to a state hospital for the insane, there to remain for such time as the court may direct pending the determination of their insanity.

12. That it is the sense of the Association that it is subversive of the dignity of the medical profession for any of its members to occupy the position of medical advisory counsel in open court and at the same time to act as expert witness in a medicolegal case.

13. That we regard the acceptance by a physician of a fee that is contingent on the result of a medicolegal case as not in accordance with medical ethics and derogatory to the good repute of the profession, and advocate the regulation of the practice by legislation.

14. That we are in favor of any legislation that will secure a definite standard of qualification for medical men giving expert testimony.

HENRY R. STEDMAN, M.D.
CARLOS F. MACDONALD, M.D.
CHARLES K. MILLS, M.D.
CHARLES P. BANCROFT, M.D.
H. A. TOMLINSON, M.D.

REPORT OF THE COMMITTEE ON DEFENSE— MAY, 1913

In our report of last May we stated that there were at that time eleven cases pending. Since then two cases which were believed to have been finally dropped were revived, making thirteen in all filed prior to May 18, 1912, and at that date still pending.

Since May 18, 1912, ten new suits have been referred, making in all twenty-three suits coming to the notice of the present committee.

Of this number six have terminated in favor of the defendants; two of these were dismissed, and in four that came to trial a verdict was rendered for the defendant.

In two a verdict was rendered for the plaintiff: in one of these two a motion for a new trial was allowed. We confidently expect that the verdict will be reversed; the other is to be appealed.

One suit resulted in a hung jury: one was nonsuited; both are to be retried.

Thirteen cases have not yet come to trial, making seventeen in all still pending; of these, four have probably been dropped.

Of the ten new suits, two were brought in St. Louis, one each in Kansas City, St. Joseph, Springfield and Joplin, and four in other places.

The total expenses incurred for defense during the year was \$425.

PRESENT FINANCIAL STATUS

Defense Fund in Account with Missouri State Medical Association	
1912	Dr.
May 18. On hand.....	\$2,121.11
May 25. From General Fund.....	1,000.00
Interest	\$7.18
	<hr/>
	\$3,208.29
1913.	Cr.
May 13. Expended May 13, 1912, to May 13, 1913	\$ 425.00
On hand	2,783.29
	<hr/>
	\$3,208.29

A comparison of this with former reports shows that the number of cases to be defended increases year by year. The number of cases at this time in the hands of the committee shows that the expense during the coming year will considerably exceed that for any preceding year. The committee accordingly recommends that an additional sum of \$1,000 be appropriated at this meeting for the defense fund.

The committee desires to call attention to the fact that it often occurs that cases are first brought to its attention only after suit has actually been filed. In all but the rarest instances the defendant has had warning of the suit for some time and, therefore, should have communicated at once with the committee. Only in cases in which the committee is placed in possession of this early information can the best results be obtained.

We express our grateful thanks to Mr. Morton Jourdan of St. Louis for his efficient and unselfish services and to the secretary, Dr. E. J. Goodwin, for his invaluable assistance.

JOSEPH GRINDON, *Chairman*,
WALTER B. DORSETT,
ROBERT E. SCHLUETER.

The Committee.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION, 1913

We, the Committee on Public Policy and Legislation, respectfully submit the following report:

This being "legislative year," the time of this committee has been largely taken up with advocating good bills and working for the defeat of bad ones. Its duties in this branch were rendered more arduous by the action of a member of this Association, namely, Dr. John Green, Jr., of St. Louis, then chairman of the Medical Section, who wrote a letter indorsing an optometry bill. This letter was printed and sent broadcast over the state by the optometrists in such a manner as to lead many doctors and more laymen to believe the bill had the indorsement of the organized profession. This was hardly to be expected from one who two years ago had appeared before a committee of the legislature in opposition to an optometry bill whose purpose and intent was the same as this one. The optometrists, made more bold by their admirable success in enlisting Dr. Green in their ranks, attempted to draw the president and secretary into a net under the pretext of "a conference," notwithstanding the positive declaration of the president at this conference that he would have absolutely nothing to do with the bill. The statement was freely made by the optometrists at the hearing before the Committee on Criminal Jurisprudence of the House of Representatives,

that the bill was drawn at the conference of the optometrists and officers of the State Medical Association, which statement was promptly met by the president and given the lie.

This action on the part of the optometrists clearly indicates their methods, their moral standards and their regard for the medical profession. Optometrists, particularly, are well organized right now for the 1915 General Assembly. The indications are that they are watching, and attempting to discredit, the organized medical profession in order to further their own interests, and they will undoubtedly come before the next legislature with a bill seeking to legalize the practice of optometry. The same holds true of other cults attempting to enter the practice of medicine by the "short route," thereby setting up two standards of medicine.

The attitude of Dr. John Green, Jr., to the efforts of the State Medical Association which, on two separate occasions, had declared its firm opposition to the optometry bill, was reported to the Judicial Council with the request that his pernicious activity be checked to the extent at least that he should not continue it as an officer of this Association. We highly appreciate the decisive action taken by the Judicial Council, through its Executive Committee, in conference with the Committee on Public Policy and Legislation and the Publication Committee, when it requested Dr. Green to sever his connection with the State Organization as chairman of the Section on Medicine.

Your committee desires to extend its heartiest thanks to the members throughout the state for their prompt and effective response to appeals of our committee for letters and petitions to their senators and representatives.

It is a significant fact that while the standard of medical education has been materially raised, the cults of near-doctors have also been increasing. If any of these cults should succeed in passing their bills it would strengthen others so that in a short time restrictions would be removed from all persons practicing medicine save the regular physician.

The committee desires to express its grateful acknowledgements to some of the members of the General Assembly for conspicuous services in preventing the passage of reactionary medical bills, and especially do we owe our thanks to Mr. James H. Hull, the speaker of the house; Mr. E. C. Orr of Livingston County, the Democratic floor leader; Mr. Joshua Barbee of Saline County, chairman of the committee on criminal jurisprudence; Col. William H. Phelps of Jasper County, Mr. John J. Wolfe of Jasper County and Mr. George Lloyd of St. Louis. Also to the physician members, namely: Senators W. S. Allee, Lee Welch and T. J. Feaster, and Representatives J. H. Martin, A. W. Teel, S. S. Cox, John A. Eaton and J. Seaton Tyler.

SPEAKERS' BUREAU

The establishment of the Speakers' Bureau has demonstrated the value of conducting this kind of work under the direction of the committee instead of being left to the haphazard personal endeavors of the members and unorganized work of the component societies. Since this bureau has been thoroughly organized we have required a report from each speaker, stating the subject on which he lectured, the number in the audience, the apparent interest manifested and the means adopted by the county society to bring about the interest of the people in the lecture. On Oct. 20, 1912, Dr. Dore Green-Wilson, State Chairman of the A. M. A. Woman's Committee on Public Health Education, was made an associate member of your committee on Public Policy and Legislation in order that the work of the Woman's Committee might be correlated and all public health endeavors in this state conducted under the control of the State Medical Association. The

American Medical Association has cooperated with us by paying the expenses of some of these speakers. These are all vital points for consideration, because of the attempt to systematize this part of the Association's endeavors. Lectures have been delivered at the following places: Dr. F. J. Lutz, at Mexico, Audrain County; Dr. William Krauss of Memphis, Tenn., at Poplar Bluff, Butler County; Dr. F. J. Lutz, at Paris, Monroe County; Dr. W. J. Calvert, at Bowling Green, Pike County; Dr. G. H. Hoxie, at Marshall, Saline County; Dr. W. B. Dorsett, at Memphis, Scotland County.

In addition to the above lectures already delivered, the following have been arranged for: Dr. E. B. Hoag of St. Paul, Minn., at Springfield, Greene County, May 20; Dr. G. H. Hoxie, at Butler, Bates County, May 29.

HYGIENIC AND SANITARY EXHIBITS AT THE STATE FAIR

In October, 1912, your committee conducted exhibits and a public health lecture course at the State Fair at Sedalia. An effort was made to concentrate in one space all the public health endeavors in the state, but we succeeded only in having our Association, the State Board of Health, the Pure Food Commissioner, the State Veterinarian and the St. Louis Board of Health prepare exhibits.

Our Association provided moving pictures on various preventive medicine topics and ten lectures of a half-hour each. Our members responded to requests to deliver these lectures and paid their own expenses. The committee acknowledges its obligation to Professor Kirk of the Kirksville Normal School for loan of a motion picture machine and for the assistance of Mr. Burrows, also of Kirksville Normal School, to operate the machine. Unfortunately Mr. Burrows was called home and we had to hire an operator.

The State Board of Health exhibited charts showing the death-rate from various diseases and a microscope with a slide containing tuberculosis bacilli. This was in charge of Mr. W. E. Crampton, state statistician.

The St. Louis Board of Health exhibited charts and products showing the spread of contagious diseases and printed matter containing instructions to prevent contagion.

The State Veterinary Exhibit consisted of preserved and fresh specimens of diseased meats which attracted a great deal of attention. The exhibit was in charge of Mr. E. B. Ward, deputy inspector of the state veterinary department.

The Pure Food Exhibit was in charge of Mr. J. O. Halverson, deputy commissioner. Specimens of spoiled canned goods and adulterated food products were exhibited and instructions given visitors as to how adulterations could be detected by household tests.

Dr. Goodwin, secretary of the state association, was in charge of the undertaking and it was due to his suggestion that the exhibit was made. We are indebted to the Board of Agriculture and to Mr. J. T. Stimson, secretary of the state fair, for space and cooperation to make the work a success. We also wish to extend our appreciative thanks to the doctors of Sedalia for their earnest and constant attention to the preparation of the exhibit and for their assistance to the secretary.

CONFERENCE OF NATIONAL LEGISLATIVE COUNCIL

Your chairman attended the Ninth Annual Conference of the National Legislative Council at Chicago, Monday and Tuesday, February 24 and 25, at which the work being done in this state was reported to the national committee. That part of our work relating to the public health lectures held at the state fair was considerably commented on as a novel proceeding and representatives of some states contemplate inaugurating such a feature in their own state fair.

Your committee has been compelled, through lack of funds, to discontinue the public health educational work through county newspapers.

RECOMMENDATIONS

Your committee desires to impress on the Association the following suggestions and recommendations:

The importance of activity by county societies in legislative work was demonstrated at this session.

The importance of having someone constantly on the ground during the meeting of the legislature was thoroughly demonstrated. The attitude of the legislators this year was on the whole very friendly toward the medical profession.

In order to keep the members acquainted with our present medical practice act, the committee recommends that the law be published in *THE JOURNAL* once or twice a year.

The exhibit at the state fair was such a pronounced success that your committee recommends it be an annual feature.

If sufficient funds are in the treasury, which will have to be obtained by increasing the dues, the state association should assist the county societies in the prosecution of illegal practitioners.

This committee acknowledges the receipt of the report of the Committee on Public Health, Legislation and Economic Conditions of the Southwest Medical Association. The report is very complete and fully covers the ground, and we would recommend the formation of such committees in all other district medical societies in the state.

SCHEDULE OF LECTURES AT THE STATE FAIR—1912

Monday, September 30

Dr. Edwin H. Schorer, Kansas City, "Typhoid Fever and Water-Supply." 10 to 10:30 a. m.

Dr. F. B. Hiller, Jefferson City, Secretary State Board of Health, "Vital Statistics." 10:30 to 11 a. m.
Moving pictures, 11 to 12.

Tuesday, October 1

Dr. F. J. Lutz, St. Louis, "Cancer." 10 to 10:30 a. m.

Dr. P. M. Carrington, St. Louis, U. S. Public Health Service, "The Plague." 10:30 to 11 a. m.
Moving pictures, 11 to 12.

Wednesday, October 2

Dr. F. E. Murphy, Kansas City, "Vaccination and Small-Pox." 10 to 10:30 a. m.

Dr. C. H. Neilson, St. Louis, "Tuberculosis." 10:30 to 11 a. m.
Moving pictures, 11 to 12.

Thursday, October 3

Dr. R. M. Funkhouser, St. Louis, President Missouri State Medical Association, "Venereal Diseases." 10 to 10:30 a. m.

Dr. S. Sheldon, State Veterinarian, Columbia, "Diseases of Animals." 10:30 to 11 a. m.
Moving pictures, 11 to 12.

Friday, October 4

Dr. F. L. Henderson, St. Louis, "Trachoma." 10 to 10:30 a. m.

Dr. S. Stewart, Kansas City, Secretary Missouri State Veterinary Association, "Diseases of Animals." 10:30 to 11 a. m.

Moving pictures, 11 to 12.

The following are the titles of bills affecting the public health and statement of their disposition:

HOUSE BILL NO. 20

Introduced by Mr. Hay of Callaway County

AN ACT

To amend Section 1367 of Article VI, Section 1454 of Article IX, Section 1470 of Article X, Section 1484 of

Article XI, Section 1501 of Article XII and Section 1544 of Article XVI, all of Chapter 19, entitled "Charities and Corrections," and to repeal Section 1368 of Article VI of said chapter, and to enact in lieu thereof a new section relating to the subject to be known as Section 1368.

This bill provided for non-partisan boards of state eleemosynary institutions. It did not pass.

HOUSE BILL NO. 84

Introduced by Dr. Martin of Iron County

AN ACT

To regulate the manufacture and sale and to prevent the adulteration and misbranding of disinfectants, deodorants, antiseptics and germicides, to regulate the labeling of such preparations, to provide for the standardization of disinfectants, deodorants, antiseptics and germicides, and providing penalties for the violation of this act.

This bill passed both houses but was vetoed by the governor.

HOUSE BILL NO. 204

Introduced by Mr. Orr of Livingston County

AN ACT

Prohibiting fortune telling, clairvoyance and the pretending to effect any purpose by necromancy of incantation for lucre or gain and prescribing a penalty therefor.

Did not pass.

HOUSE BILL NO. 283

Introduced by Mr. Doc Brydon of Stoddard County

AN ACT

To regulate the practice of optometry.

Did not pass.

HOUSE BILL NO. 317

Introduced by Mr. Orr of Livingston County

AN ACT

Creating the office of medical supervisor for state hospitals for the insane, and prescribing his qualifications and duties, with an emergency clause.

Did not pass.

HOUSE BILL NO. 536

Introduced by Mr. McNamara of St. Louis

AN ACT

To promote the public health by protecting certain employes in this state from the dangers of occupational or industrial diseases, providing penalties and providing for the enforcement thereof.

Passed.

HOUSE BILL NO. 629

Introduced by Mr. Hicks of Kansas City

AN ACT

Creating the state board of eclectic medical examiners.

Did not pass.

HOUSE BILL NO. 641

Introduced by Mr. Woodward of Knox County

AN ACT

To amend Article 1, Chapter 78, Revised Statutes of Missouri, 1909, by adding a new section thereto, to be known as Section 8319a, and to amend Section 8317 of said article by inserting certain words in said section.

This is the bill prohibiting fee-splitting. It did not pass.

HOUSE BILL NO. 650

Introduced by Mr. Ratchford (by request), St. Louis

AN ACT

To amend Section 8319 of Chapter 78, Article 1 of the Revised Statutes, relating to medicine, surgery and midwifery. This is the bill introduced by chiropractors and mental healers.

Did not pass.

HOUSE BILL NO. 717

Introduced by Dr. Cox of Montgomery County

AN ACT

To amend Section 5768, Chapter 42 of the Revised Statutes of Missouri, 1909.

To permit physicians to practice pharmacy without an examination. Did not pass.

HOUSE BILL NO. 788

Introduced by Mr. Sheehan of St. Louis

AN ACT

To regulate the practice of chiropody in the State of Missouri.

Did not pass.

HOUSE BILL NO. 129

Introduced by Mr. Poston (by request), St. Francois County

AN ACT

To regulate the practice of medicine and surgery. Physicians must file percentage of mortality for publication.

Did not pass.

HOUSE BILL NO. 854

Introduced by Mr. Orr of Livingston County

AN ACT

To regulate the practice of suggestive therapeutics.

This bill was intended to allow such institutions as the Weltmer Institute to graduate persons as doctors of suggestive therapeutics and license them to practice medicine as such. It died in committee.

A. R. McCOMAS, *Chairman*;

A. W. McALESTER, JR.,

B. B. PARRISH,

R. M. FUNKHOUSER, *President*; } *Ex-Officio*

E. J. GOODWIN, *Secretary*. } *The Committee.*

REPORT OF THE COMMITTEE ON PROGRAM

Your program committee has prepared a program for the 1913 meeting which you may see in the official printed program.

In making up a program for the state meeting, certain inherent difficulties arise, because, according to the present constitution and by-laws the business of the Association interferes so much with the scientific program. We are all familiar with many of our past meetings where the printed scientific program could not be carried out on account of the business of the Association. Many physicians have prepared papers and did not get to read them as the time was too short. The scientific part of the state meeting should be paramount. To make his so, and in conformity with the vote of the House of Delegates, which voted in 1912 to lessen the amount of section work, we this year have given only one afternoon to the sections on surgery and medicine. We also have arranged for the House of Delegates and the Judicial Council to do their business on the first day of the meeting, the evening of the first day being given to the addresses of the president and the orators. The election of president and orators was left as heretofore, on the morning of the third day of the meeting.

After considering all the facts, your committee recommends that no sections be allowed; that all scientific work be in general session; that the first day of the meeting be given over to the business of the Association as conducted by the House of Delegates and Council; that the election of president and orators be conducted by the House of Delegates, preferably

on the first day of the meeting. This method of procedure will give two whole days for the carrying out of the scientific program.

CHAS. H. NEILSON, *Chairman*;
O. H. BROWN,
W. T. REYNOLDS,
H. P. KUHN,
The Committee.

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

We, your Committee on Revision of the Constitution and By-Laws, beg to submit the following report and recommendations:

Amend Article 8, Section 1 of the Constitution to read as follows: 'The officers of this Association shall be a President, five Vice-Presidents, a Secretary, a Treasurer and twenty-nine Councilors, more or less, as shall be determined by the House of Delegates from time to time.

Amend Article 8, Section 3, to read as follows: The President, Vice-Presidents, Councilors and Orators shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of Councilor, and no person shall be elected to any office who is not in attendance at the annual session and who has not been a member of the Association for the past two years.

Annul Section 4 of Article 8.

Annul Section 6 of Chapter 5 of the By-Laws.

Amend Chapter 8, Section 2, of the By-Laws to read: The Committee on Scientific Work shall consist of three members to be appointed by the president. One of these shall be the secretary of the Association and he shall act as its chairman.

It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly as practicable.

Amend Chapter 12, Section 10, of the By-Laws by adding the following thereto: No one shall become a member of any component county society, nor continue as such, who engages in contract with any lodge, society, or individual, unless he shall receive for services rendered, the regular fee, as per fee bill established by said society. Provided that this shall not prohibit an agreement for a particular case nor apply to examinations for an adequate fee.

No one shall become a member of any component county society, nor continue as such, who is guilty of soliciting patronage or obtaining patients by a division of fees, or by other means of inducing physicians or other persons to bring patients to him for a consideration, for treatment or operation.

THOS. O. KLINGER, *Chairman*;
THOS. H. DUCKETT.

REPORT OF COMMITTEE ON TUBERCULOSIS

The report on tuberculosis for the last several years has been more a theoretical report than a report of the actual work done. These reports dealt principally with the work done in the large centers of population with no special reference to the work done in the smaller towns and rural districts. In the report of 1912 special emphasis was laid on a campaign of education in the remotest parts of the state. An appeal was made to physicians

to make use of the law enacted by the legislature in 1911 for establishing county and district sanatoriums. A report on tuberculosis should show in some measure, at least, how much work is actually being done in all parts of the states. This fact is of greatest importance as a basis for the application of theories and plans for the relief and treatment of tuberculosis. Realizing the importance of having actual knowledge of the interest and amount of effort made by our physicians in various parts of the state, your committee sent a letter to the secretary of each county society in the state. In this letter a series of questions were asked relative to the amount of tuberculosis work done by each county society. These questions were based in the main on certain suggestions made by the committee of 1912. The questions asked of each secretary are shown below in the copy of the letter.

LETTER SENT TO EACH COUNTY SECRETARY

Dear Doctor:—I am attempting to get some data for a report on tuberculosis for the state meeting. Will you kindly answer the following questions and report to me:

I. Has your county society made any attempts to educate the people in regard to tuberculosis along the following lines:

1. Lectures on tuberculosis?
2. Printed matter on the signs of beginning tuberculosis, such as prolonged cough, etc.?

3. Have you called attention in your county newspapers to the prevalence of tuberculosis, the method of its spread, by filth, dirt, flies, etc.?

4. Have you had any moving pictures calling attention to tuberculosis?

II. Have any state officials or tuberculosis workers made any attempts to inform your people on tuberculosis?

III. Is there any movement on foot in your county to build a sanatorium for tuberculous patients.

IV. Is there any movement to build a district sanatorium in your section of the state?

V. How many death from tuberculosis in your county in 1912?

How many cases reported?

An analysis of the replies to this letter shows the following facts:

(1) Seventy-two counties sent in no report.

(2) Sixteen of the counties which sent in a report have made no attempt to do any tuberculosis work.

(3) Ten counties have done some work and these principally in the larger centers of population; Jackson, Cole, St. Clair and Buchanan counties, and the city of St. Louis doing the most active work.

(4) The amount of work in educating the people in regard to tuberculosis is so small as to be pitiful.

A hopeful sign is seen, in that three of the twenty-eight counties who reported have started a movement for tuberculosis sanitariums. Buchanan is to be commended in this respect. The statement, "No tuberculous patient in Buchanan County uncared for after 1916" on the outside of the county secretary's envelope, is gratifying. Those counties who sent in no report are perhaps doing some work, but the interest can not be great, otherwise a report would have been sent to your committee. A comparison of the amount of work done in this important field of preventive medicine with that done in many other states is not necessary, as a consideration of this report will show how little is being done in Missouri. Your committee recommends to the up-to-date and wide-awake physicians of Missouri that during 1913 an earnest effort be made for the agitation of building county or district tuberculosis sanatoriums.

THE COMMITTEE.

REPORT OF COMMITTEE ON NECROLOGY

We have done our best to gather information, and note the essential points concerning all the physicians who have died residents of the state of Missouri in the last year. Doubtless there are some whom we have missed, but no reputable physician, whether a member of the organization or not, has been intentionally omitted.

J. E. HARRIS, *Chairman*;
ROBERT BARCLAY,
W. M. H. EVANS,

The Committee.

John J. Rice, M.D., Cincinnati College of Medicine and Surgery, 1881. Member Missouri State Medical Association, a prominent citizen of Kearney, Clay County, Mo., died in St. Joseph Hospital, Kansas City, Mo., May 12, 1912, after a surgical operation, aged 61.

Rosecoe L. Hale, M.D., Rush Medical College, 1864, Surgeon of the Volunteers during the Civil War, and for more than forty years a practitioner at Sedalia, Mo., died at his home, April 16, 1912, from senile debility, aged 82.

Dr. Mary L. Phillips, College Physicians and Surgeons, Kansas City, Kan., 1897, of Kansas City, Mo., died in Mineral Wells, Texas, April 17, 1912.

John M. Rice, M.D., Beaumont Hospital Medical College, St. Louis, 1893, of Kansas City, Mo., died in the Planter's Hotel, Kansas City, March 29, 1912, from cerebral hemorrhage, aged 40.

Robert Lee Moore, M.D., Beaumont Hospital Medical College, St. Louis, 1888, died at his home in St. Louis, June 19, 1912.

John Wesley Matthews, M.D., American Medical College, St. Louis, 1875, for more than sixty years a local preacher and missionary of the M. E. Church, South, surgeon in the Confederate service during the war between the states, died at the home of his son in Liberty, Mo., May 5, 1912, from senile debility, aged 87.

William M. Houf, M.D., Missouri Medical College, St. Louis, 1884, a retired physician of Farmersville, Mo., died May 20, 1912, aged 60.

William E. Wood, M.D., Eclectic Medical Institute, Cincinnati, 1891, died suddenly at his home in St. Louis, July 23, 1912, aged 49, probably heart disease; he was a member of the St. Louis Medical Society.

Charles Van Wye, M.D., Louisville (Ky.) Medical College, 1884, a veteran of the Civil War, for many years a resident of Linn and Sullivan Counties, Mo., died suddenly in front of his office at Browning, Mo., Sept. 26, 1912.

Benjamin B. Putnam, M.D., Medical Department, Washington University, St. Louis, 1872, a member of the Linn County and Missouri State Medical Societies, died July 24, 1912, aged 68, from pernicious anemia.

Henry J. C. Sieving, M.D., St. Louis, Beaumont Hospital Medical College, St. Louis, 1897, member of St. Louis, Missouri State and American Medical Associations, died June 21, 1912, aged 54.

Samuel Ward Cossins, M.D., Missouri Medical College, 1887, member of the Polk County, Southwest Missouri and Missouri State Medical Societies, died at his home in Bolivar, Mo., August 10, 1912, aged 51.

James M. Perkins, M.D., Missouri Medical College, St. Louis, 1890, died at his home in Laclede, Mo., Aug. 24, 1912, aged 58.

Dr. T. R. Bridges, licensed in Missouri in 1883, died at his home in Syracuse, Aug. 1, 1912, aged 69.

Charles W. Allen, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1868, surgeon in the Confederate service during the Civil War, died at his home in Bedford, Mo., Sept. 1, 1912, aged 76.

Arthur H. Frudeberg, M.D., Washington University of St. Louis, 1904, died at his home in St. Louis, Sept. 28, 1912, from the effects of a fish bone lodged in his throat, aged 48.

Dr. Samuel J. Terrill, Meta, Mo., died at his home Sept. 13, 1912, aged 35. He was a graduate of Barnes Medical College, St. Louis, in 1901.

Dr. John T. Knowles, Springfield, died at his home Sept. 1, 1912, from typhoid fever. He was a graduate of Hospital Medical College, Memphis, in 1909, a member of Greene County and Missouri State Medical Societies, aged 33.

Abram D. Williams, M.D., Jefferson Medical College, 1863; honor member St. Louis Medical Society, died Aug. 6, 1912, at Bedford, Ind.; aged 74: from old age and rheumatism.

Turner W. Avery, M.D., Iowa Medical College, Keokuk, 1895, a member of the A. M. A., died at the home of his brother in Higbee, Mo., Oct. 3, 1912, from dropsy, aged 42.

Arthur Leonard Fulton, M.D., Missouri Medical College, St. Louis, 1897, formerly a member of the St. Louis Medical Society, died in Medina, Texas, Sept. 1, 1912, from tuberculosis, aged 39.

Lewis H. Dunelius, M.D., Miami Medical College, 1888, Briscoe, Mo., was operated for appendicitis, Sept. 26, 1912; died at his home Oct. 7, 1912, aged 54.

John T. Mitchell, M.D., Jefferson Medical College, 1880; a member of the Missouri State Medical Association, for twenty-five years a practitioner of Kansas City; Professor of Anatomy in the Western Dental College and Lecturer in the Kansas City School of Pharmacy; died in St. Luke's Hospital, Kansas City, Nov. 4, 1912, from pneumonia, aged 65.

Dr. James Hanks, Brashear, Mo., died suddenly Saturday, Dec. 14, 1912, at 2 p. m. of apoplexy. Dr. Hanks graduated from Bellevue Hospital Medical College of New York, in 1890; was former president of the Adair County and North Missouri Medical Societies and at his death was a member of the Judicial Council of the Missouri State Medical Association from the Sixth District, aged 52.

Henry Diers, M.D., St. Louis College of Physicians and Surgeons, 1882; for twenty-five years a practitioner of Kansas City, Mo.; died at his home Nov. 28, 1912, aged 78.

John E. Bruere, M.D., Washington University, St. Louis, 1858; Surgeon of U. S. Volunteers during the Civil War, formerly of St. Charles, Mo., but for the past five years has lived in New York City; died at his home Nov. 22, 1912; aged 78. Although not a resident of Missouri at the time of his death, Dr. Bruere's professional life was spent in our state, and we thought proper to include his name in our list.

George Clinton Crandall, M.D., University of Michigan, Ann Arbor, 1890; a member of the American Medical Association; Professor of Medicine in the St. Louis University, formerly a member of the staff of the Northwestern Michigan State Hospital, Traverse City, Mich.; President of the Consulting Staff of the St. Louis City Hospital, Consulting Physician to St. Ann's Lying-In Hospital and Medical Director of the St. Louis Society for the Prevention and Relief of Tuberculosis; died at his home in St. Louis, Dec. 5, 1912, from nephritis, aged 47.

David Alexander Kittle, M.D., Washington University, St. Louis, 1853. Since 1865 a practitioner of Kansas City, Mo., died at his home Dec. 1, 1912, from senile debility, aged 92.

Charles Billon Gratiot, M.D., Missouri Medical College, St. Louis, 1849; one of the oldest practitioners in St. Louis, died at his home Dec. 11, 1912, from senile debility, aged 84.

John D. Pfister, M.D., Missouri Medical College, St. Louis, 1888, of Creve Coeur, Mo., formerly of Fern Ridge, Mo.; member of the Missouri State Medical Association, president of Creve Coeur Bank, founder of the Creve Coeur Mutual Telephone Co., one of the organizers of the Creve Coeur Farmers' Club; died

Dec. 11, 1812, from injuries received in an automobile accident, aged 49.

William Standing, M.D., Missouri Medical College, St. Louis, 1871; for ten years a member of the faculty of the College of Physicians and Surgeons, St. Louis; for twenty-seven years a practitioner in diseases of children in St. Louis; died Dec. 15, 1912, from pneumonia, aged 66.

Herbert A. Langan, M.D., Louisville (Ky.) Medical College, 1880; formerly police surgeon of Kansas City, Mo., died at a hotel in Houston, Texas, Dec. 18, 1912; from asthma, aged 61.

Henry Eugene Ferrell, M.D., Washington University, St. Louis, 1898; formerly demonstrator of anatomy in his alma mater; Major M. C. N. G., Mo., assigned First Infantry, and for eleven years a medical officer of that organization; a member of the Missouri State Medical Association, and once secretary of the St. Louis Medical Society; died in his office in St. Louis, Dec. 19, 1912, from the effects of gunshot wounds of the head, believed to have been self inflicted with suicidal intent while suffering from melancholia, aged 37.

Adolph H. Dietrich, M.D., Albert Ludwig's University, Frieberg, Baden, Germany 1894; formerly of Pittsburg Kan.; for six months past a resident of Kansas City, Mo., died in the Kansas City General Hospital, Dec. 16, 1912, aged 54.

Horace P. Porter, M.D., Yale Medical College, 1861; surgeon of Volunteers during the Civil War and once surgeon-general of the Grand Army of the Republic; died at his home in Butler, Mo., Dec. 23, 1912, aged 73.

Nelson A. Drake, M.D., Rush Medical College, Chicago, 1868; member of the A. M. A.; ex-president of the Jackson County Medical Society; member of the American Association of Railway Surgeons; a member of the Consulting Staff of the German Hospital, and the Surgical Staff of the University Hospital, Kansas City, Mo., and local surgeon for Rock Island System; a veteran of the Civil War; one of the founders and at one time editor of the *Kansas City Medical Index*; died at his home in Kansas City, Jan. 9, 1913, from nephritis, aged 70.

Leo John Steger, M.D., University of Tübingen, Germany, 1861; died at his home in Egypt Mills Mo., Jan. 3, 1913, from cerebral hemorrhage, aged 70.

Dr. Joseph W. Winsborough, licensed in Missouri in 1884; for several years assistant surgeon for the Western Division of the Chicago & Alton Railroad; a resident of Missouri since 1874; died at the home of his son in Kansas City, Jan. 10, 1913, from senile debility, aged 81.

Jacob E. Kimberlin, M.D., Ensworth Medical College, St. Joseph, Mo., 1898, of Union Star, Mo.; died Jan. 14, 1913, from pneumonia, at Brownsville, Texas, where he had gone on a hunting trip.

Alfred G. Aledalal, M.D., University Montpelier, France, 1852; many years a practitioner of Lawrence, Kan., died at his home in Kansas City, Mo., Jan. 25, 1913, from senile debility, aged 80.

George H. Donaldson, M.D., Missouri Medical College, St. Louis, 1875; a member of the A. M. A. and a Confederate veteran, died at his home in Kansas City, Mo., Jan. 23, 1913, from heart disease, aged 66.

Alfred Leubbers, M.D., Marion Sims College of Medicine, St. Louis, 1896, of University City, St. Louis; died at his home Jan. 27, 1913, from nephritis, aged 46.

John T. Flannagan, M.D., University Louisville (Ky.), 1880; died at his home in Bosworth, Mo., Jan. 16, 1913.

Dr. William Hansneck, a practitioner since 1863, formerly of Kansas, but for twenty years a resident of St. Louis, died at his home Jan. 30, 1913, from cirrhosis of the liver, aged 76.

Josephus R. Lemen, M.D., Missouri Medical College, St. Louis, 1875; formerly professor of diseases of the chest in the St. Louis University; consulting physician and chief of the staff of Deaconess Hospital and consulting physician to Rebekah Hospital; at one time a member of the St. Louis Board of Health; died Feb. 15, 1913, from heart disease, aged 59.

William H. Campbell, M.D., Washington University, St. Louis, 1856; for more than half a century a practitioner in Missouri; died at his home in Kansas City, February 7, 1913, from senile debility, aged 83.

Dr. James C. Frazier, Gallatin, Mo., died in his office Feb. 11, 1913, from heart disease, aged 60.

John F. Duvall, M.D., Physio-Medical College of Cincinnati; Eclectic Medical University of Kansas City, Mo., 1902; a member of the faculty of the latter institution, died at his home in Kansas City, Mo., Feb. 15, 1913, from cerebral hemorrhage, aged 66.

Alfred J. Brown, M.D., Bellevue Hospital Medical College, 1879, local surgeon at Higbee, Mo., for the C. & A. and M. K. & T. railroads, died suddenly at his store in Higbee, Feb. 17, from heart disease, aged 56.

George W. McClure, M.D., Rush Medical College, 1900, formerly of Catersville, Mo., died at his home in Springfield, Mo., Feb. 17, 1913, from tuberculosis, aged 35.

Thomas H. Doyle, M.D., University of New York, 1865, a member of the Buchanan County, Missouri State and American Medical Association; a pioneer physician; formerly police commissioner and mayor of St. Joseph, Mo.; professor emeritus of the principles and practice of medicine in the Ensworth Medical College, St. Joseph, and president of the Board of Trustees; died in St. Joseph's Hospital, Feb. 25, 1913, shortly after a surgical operation, aged 72. In 1910 Dr. Doyle was the guest of honor at a testimonial banquet given by the medical, dental and pharmaceutical professions in the city, at which a silver loving-cup was presented to him.

Doke Gentle, M.D., New Franklin, St. Louis University School of Medicine, 1908, died at St. Anthony's Hospital in St. Louis, following an operation for appendicitis, Jan. 6, 1913; he was a member of the Howard County Medical Society, the Missouri State Medical and American Medical Associations, and corresponding member of the St. Louis Medical Society, aged 27.

John Wesley Leonard, M.D., Medical College of Ohio, Cincinnati, 1886; examiner for the Burlington System Voluntary Relief Department; for one year resident physician at the Dixmount Insane Hospital at Pittsburgh, Pa.; a practitioner of St. Joseph, Mo., since 1888, died at the French Sanitarium in that city, Feb. 24, 1913, aged about 55.

Lyman R. Woodson, M.D., Ensworth Medical College, St. Joseph, Mo., 1898; a newly appointed member of the staff of State Hospital No. 2 at St. Joseph; died at his home in Rushville, Mo., Feb. 25, 1913, from pneumonia, aged 35.

Peyton L. Hurt, M.D., Jefferson Medical College, 1867, formerly president of the Cooper County Medical Society of Boonville, Mo.; died in that place, Feb. 24, 1913, from heart disease, aged 67.

Edgar Pearl Ward, M.D., Marion Sims Medical College, St. Louis, 1894; professor of embryology and obstetrics in the American Medical College, St. Louis; died at his home in that city, Feb. 22, 1913, aged 46.

Amalia Hesse, M.D., American Medical College, Eclectic, St. Louis, 1892; died at her home in St. Louis, Feb. 26, 1913, from heart disease, aged 68.

Robert Burns Gladden, M.D., University of Arkansas, Little Rock, 1888; of Purdy, Mo., formerly a member of the Missouri State Medical Association and a representative in the state legislature from Barry County;

died in the State Hospital No. 3, at Nevada, Mo., March 5, 1913, aged 59.

Edgar J. Washington, M.D., Marion Sims College of Medicine, St. Louis, 1896; died at the home of his father in St. Louis Feb. 25, 1913, aged 36.

John A. Carter, M.D., Missouri Medical College, St. Louis, 1867; a veteran of the Civil War; a resident of Jasper County, Mo., since 1865, an extensive land owner; died at his home in Carthage, Mo., March 7, 1913, from senile debility, aged 79.

Leon Straus, M.D., University of Louisville, Ky., 1877; formerly a practitioner of Louisville; died in St. Louis, March 16, 1913, aged 62.

James McClure, M.D., St. Louis, a graduate of the Rush Medical College, 1868; honor member of the St. Louis Medical Society; died at Princeton, Ind., March 14, 1913, of uremia, aged 72.

Joseph E. Stegman, M.D., Beaumont Hospital Medical College, St. Louis, 1895, of Hillsboro, Mo.; died in an ambulance in St. Louis, while being taken to the City Dispensary, March 7, 1913, aged 38.

Turner S. Riggs, M.D., Miami Medical College, Cincinnati, 1867, of McBaine, Mo.; died in Parker Hospital, Columbia, Mo., March 3, 1913, from influenza, aged 72.

Ulysses S. Durham, M.D., St. Louis College P. & S., 1890, of Cairo, Mo.; a member of the A. M. A.; died in Woodland Hospital, Moberly, Mo., March 7, 1913, aged 47.

Theodore L. Wieggers, M.D., St. Louis College P. & S., 1904; a member of St. Charles County, Missouri State and American Medical Associations; died at his home in Wentzville, Mo., March 3, 1913, aged 34.

F. E. Guibor, M.D., Missouri Medical College, St. Louis, 1872; a member of the St. Louis County, Missouri State and American Medical Associations; died at the home in Maplewood, St. Louis, in January, 1913, aged 61.

Samuel C. Skeel, M.D., St. Louis College P. & S., 1884; died at his home in St. Louis, March 15, 1913, from cirrhosis of the liver, aged 73.

A. S. Barnes, M.D., University of Missouri, 1885; formerly dean of St. Louis College of Physicians and Surgeons, and a member of the St. Louis Medical and Missouri State Medical Associations; died at his home in St. Louis, March 30, 1913, from arteriosclerosis, aged 82.

Richard L. Johnson, M.D., Medical College of the State of South Carolina, Charleston, 1861; a member of the South Carolina State Medical Association; local surgeon for the Frisco System at Rolla, Mo.; died at his home, March 11, 1913, aged 71.

Bailey, W. S., Leeper.
Baldwin, Paul, Kennett.
Ball, James M., St. Louis.
Barelay, Robt., St. Louis.
Barnes, A. S., Jr., St. Louis.
Barnes, R. H., St. Louis.
Barnhart, D. A., Huntsville.
Barnett, Mattylee, St. Louis.
Barron, W. H., Mine La Monte.
Bartels, Leo. G., St. Louis.
Bartlett, Willard, St. Louis.
*Basserman, D. C., St. Louis.
Bauer, C. E., St. Louis.
Baysinger, S. L., Rolla.
Beattie, T. J., Kansas City.
*Beck, W. M., Clarkfield, Minn.
Behrens, Louis H., St. Louis.
Bellows, G. E., Kansas City.
Benage, O. C., Conway.
Billings, J. M., Lebanon.
Black, W. D., St. Louis.
*Blackmer, R. C., St. Louis.
Bliss, M. A., St. Louis.
Bobbitt, A. A., Joplin.
Boisliniere, Louis C., St. Louis.
Bonnott, Edmond, St. Louis.
Boogher, J. Leland, St. Louis.
Booth, D. S., St. Louis.
Bosse, E. H., St. Louis.
Bostick, Will, St. Louis.
Bounds, E. H., Hannibal.
Bourn, J. J., Hannibal.
Boone, John C., Charleston.
Boulware, T. C., Butler.
Bradley, A. H., St. Louis.
Brady, Jules M., St. Louis.
Braecklein, W. A., Higginsville.
Bragg, G. G., Huntsville.
Breuer, W. H., St. James.
Bridges, J. B., Downing.
Briegleb, C. F., St. Clair.
Brown, O. H., St. Louis.
Brown, John Young, St. Louis.
Bristoe, G. M., Princeton.
Bryan, R. Shepard, St. Louis.
Brosius, W. L., Gallatin.
Brown, F. H., Billings.
Brummall, J. D., Salisbury.
Buhman, R., St. Louis.
Burford, C. E., St. Louis.
Burgess, J. W., Belle.
Burkhalter, C. F., Higbee.
Burke, J. P., Jr., California.
Burns, S. S., St. Louis.

Cadwallader, I. H., St. Louis.

*Caldwell, C. B., Lincoln, Ill.
Cadwell, Victor, Poplar Bluff.
Calvert, W. J., Columbia.
Campbell, A. J., Sedalia.
Cannon, G. S., Farnfeldt.
Cape, L. W., Maplewood.
Carriere, T. L., St. Louis.
Carriere, V. A., St. Louis.
Carrington, P. M., St. Louis.
Carter, Howard, Webster Groves.
*Carter, W. J., Mattoon, Ill.
Caulk, Jno. R., St. Louis.
Chandler, J. J., Lutesville.
Charles, J. W., St. Louis.
Child, Scott P., Kansas City.
Chilton, J. C., Hannibal.
Chostner, N. F., Dutchtown.
Chowning, Thos., Hannibal.
Clancy, J. F., St. Louis.
Clapper, W. L., St. Louis.

*Visitor.

MEMBERS REGISTERED AT ANNUAL MEETING,

MAY 13, 14, 15, 1913

Allee, G. D., Lamar.
Allee, W. L., Eldon.
Allee, W. S., Olean.
Alford, R. Lee, Vandalia.
Allen, F. W., Callao.
Allen, T. C., Bernie.
Alton, G. P., Gashland.
Ameiss, F. C., St. Louis.
Amerland, J. H., St. Louis.
Ambrose, Olney A., St. Louis.
Armstrong, C. L., Webster Groves.
Armstrong, John H., Kirkwood.
Aufderheide, W. D., St. Louis.
Austin, M. B., Brunswick.
Anthony, C. A., Fredericktown.
Ayars, T. R., St. Louis.
Babler, E. A., St. Louis.
Bailey, Fred W., St. Louis.

- Clark, I. Ross, St. Louis.
 Clark, W. A., Jefferson City.
 Clapp, C. B., Moberly.
 Cline, W., Appleton City.
 Clopton, M. B., St. Louis.
 Coelran, J. H., St. Louis.
 *Collins, Chas. H., St. Louis.
 Conover, C. C., Kansas City.
 Cox, W. S., Cuba.
 Cooley, E. L., St. Louis.
 Cooper, J. O., Linn.
 Coughlin, W. T., St. Louis.
 Craig, Thos. B., Nevada.
 Crawford, H. S., Harrisonville.
 *Crews, C. H., Clay City, Ill.
 Crider, A. J., Meta.
 Crum, J. A., Marion.
 Cummings, C. C., Joplin.
 Cummings, H. J., St. Louis.
 Cumpton, V. J., Pleasant Gap.
 Curl, A. C., Schell City.
 *Currier, M. L., Cottleville.
 Curtis, A. N., St. Louis.
 Cuppidge, G. O., Moberly.
 *Cuther, S. P., Warrensburg.
 Dames, A. F., St. Louis.
 Davis, Robert H., St. Louis.
 Dean, John McH., St. Louis.
 Deutsch, Wm. S., St. Louis.
 DeVilbiss, E. F., Kansas City.
 *Dickson, P. L., Paragould, Ark.
 Diell, C. H., St. Louis.
 Dinwiddie, T. H., Higbee.
 Dixon, C. H., Holliday.
 Dock, George, St. Louis.
 Donnell, R. E., De Soto.
 Dorsett, E. Lee, St. Louis.
 Dorsett, Walter B., St. Louis.
 Dorsey, Ben. L., St. Louis.
 Douglas, J. T., Ferguson.
 Dowell, Geo. S., Braymer.
 Downings, T. J., New London.
 Dreehsler, Louis, St. Louis.
 Duskett, T. H., Milford.
 Duncan, J. H., St. Louis.
 Dummevant, Chas. A., Kirkwood.
 Dunigan, Jas. P., Sullivan.
 Dusenberry, C. T., Monett.
 *Dyer, C. P., St. Louis.
 Dyer, D. P., Sedalia.
 Edgar, T. O., St. Louis.
 Ehrenfest, H., St. Louis.
 Eidmann, W. P., St. Louis.
 Elbreeht, O. H., St. Louis.
 Elam, W. T., St. Joseph.
 Elkins, C. B., Springfield.
 Elliott, J. H., West Plains.
 Engman, M. F., St. Louis.
 Ewing, A. E., St. Louis.
 Eure, J. B., Poplar Bluff.
 Estill, W. G., Lawton.
 Evetz, Adolph M., St. Louis.
 Falk, J. C., St. Louis.
 Farthington, F. B., Green Top.
 Fassett, Chas. Wood, St. Joseph.
 Ferguson, A. D., Hunnewell.
 Ferguson, W. J., Sedalia.
 Fleming, A. W., St. Louis.
 Fogle, Robt. L., Otterville.
 Freudenberg, H. C., Clarksburg.
 Frankenthal, M. A., St. Louis.
 Frick, Wm., Kansas City.
 Frennd, N. M., St. Louis.
 Fulton, F. H., Plattsburg.
 Funkhouser, Robt. M., St. Louis.
 Gay, R. W., Ironton.
 Gebhart, Oliver C., St. Joseph.
 Gellhorn, George, St. Louis.
 Gettys, Henry, St. Louis.
 Gibbs, T. J., Proctor.
 Glasgow, Frank, C., St. Louis.
 Glennon, W. P., St. Louis.
 Goldstein, M. A., St. Louis.
 Goodier, Robt. H., Monroe City.
 Goodwin, E. J., St. Louis.
 Gossow, A. A., St. Charles.
 Graee, H. M., Chillicothe.
 Graves, W. W., St. Louis.
 Gray, A. D., New Cambria.
 Gray, A. L., St. Joseph.
 Gray, Isabel, St. Louis.
 Guy, R. J., Paynesville.
 Green, John, Jr., St. Louis.
 Greensfelder, Harry, Kirkwood.
 Greer, E. O., St. Louis.
 Griffin, P. H., St. Louis.
 Gross, Julius H., St. Louis.
 Grosse, L. W., St. Louis.
 Gundelach, C. Armin, St. Louis.
 Gunn, A. J., Versailles.
 Haire, Robt. D., Clinton.
 Hale, Jos. M., Dearborn.
 Haley, O., Fredericks town.
 Haley, Robt., Brookfield.
 Hall, C. Lester, Kansas City.
 Hall, F. B., St. Louis.
 Hall, Frank J., Kansas City.
 Hall, John R., Napton.
 Hall, O. B., Warrensburg.
 Hamel, A. H., St. Louis.
 Hans, Willard J., St. Louis.
 *Hardman, J. G., Commerce, Ga.
 Hardy, W. F., St. Louis.
 Harral, W. E., St. Louis.
 Harris, D. L., St. Louis.
 Harrison, J. F., Mexico.
 Hartmann, J. A., St. Louis.
 *Harutun, M. B., Joplin.
 Hays, B. W., Jackson.
 Hayward, J. D., St. Louis.
 Hemplehman, L. H., St. Louis.
 Hempleman, Theo. C., St. Louis.
 Henderson, R. T., Jackson.
 Henke, A. F., St. Louis.
 Henske, J. A., St. Louis.
 Henson, L., Galena.
 Herbert, T. B., Lebanon.
 Hertzler, A. E., Kansas City.
 Heuer, P. J., St. Louis.
 Hewitt, W. R., St. Louis.
 Higdon, E. E., Allenville.
 Hight, W. B., Queen City.
 Hill, Howard, Kansas City.
 Hill, Roland, St. Louis.
 Hiller, Frank B., Jefferson City.
 Hinchey, Frank, St. Louis.
 *Hodges, W. A., Nokomis, Ill.
 Hoffman, Phil, St. Louis.
 Hoge, M. W., St. Louis.
 Holdenried, Wm. E., St. Louis.
 Holt, E. E., St. Louis.
 Homan, George, St. Louis.
 Hooss, Albert, St. Louis.
 Hope, D. H., Cape Girardeau.
 Hopkins, M. J., St. Louis.
 Hopkins, Thos. A., St. Louis.
 Hornback, J. T., Nevada.
 Horwitz, A. E., St. Louis.
 Hough, Chas. P., Jefferson City.

*Visitor.

*Visitor.

- Houwink, J. J., St. Louis.
 Howard, D. F., Brookfield.
 Howard, F. A. Slater.
 Howle, W. R., Charleston.
 Hoxie, G. H., Kansas City.
 Hughes, H. S., St. Louis.
 Hughes, Marc Ray, St. Louis.
 Hume, E. L., Bourbon.
 *Humphrey, J. A., Oklahoma.
 Hurford, P. G., St. Louis.
 Hutton, W. S., Farmington.
 Hyland, Robt. T., St. Louis.
 Hypes, B. M., St. Louis.

 Jackson, Jabez N., Kansas City.
 Jacobson, Henry, St. Louis.
 Jarvis, N. W., Bloomsdale.
 Jenkins, J. M., St. Peters.
 Jennings, J. Ellis, St. Louis.
 Jerard, H., Pleasant Hill.
 Jonas, Ernst, St. Louis.
 Jones, W. G., Lincoln.
 Jones, J. L., Jonesburg.
 Jurgons, H. J., Edina.

 Kampschmidt, A. W., Columbia.
 Kane, R. Emmet, St. Louis.
 Kanoky, J. P., Kansas City.
 *Keegan, Lawrence S., San Diego, Cal.
 Kelley, I. D., Jr., St. Louis.
 Kempff, Louis A., St. Louis.
 Kerr, H. L., Crane.
 Kieffer, A. R., St. Louis.
 Kieffer, V. B., St. Louis.
 Kimball, A. C., St. Louis.
 Kirchner, Walter C. G., St. Louis.
 Kirkpatrick, H. E., St. Louis.
 Klein, S., St. Louis.
 Klingner, Thos. O., Springfield.
 Knabb, Enoch, Springfield.
 Knott, Minerva, Sedalia.
 Koch, Otto W., Ballwin.
 Koetter, A. F., St. Louis.
 Kramolowsky, H. H., St. Louis.
 Kuhlman, F. C. E., St. Louis.
 Kuhn, H. P., Kansas City.
 Kuhn, Wm. F., Kansas City.
 Kuper, Geo. H., St. Louis.
 *Kurtz, R. L., Neoga, Ill.

 Landaker, C. L., Collins.
 Lanyon, W. H., Joplin.
 Latham, H. W., Latham.
 Lavender, C. L., Marthasville.
 Leach, H. T., Elston.
 Leighton, W. E., St. Louis.
 Lemon, A. C., Calhoun.
 Levy, Aaron, St. Louis.
 Lewis, Bransford, St. Louis.
 Link, J. J., St. Louis.
 Lippe, M. J., St. Louis.
 Liston, E. H., Cedar Springs.
 Lockwood, T. F., Butler.
 Loeb, Hanau W., St. Louis.
 Long, Frank B., Sedalia.
 Love, W. S., Bertrand.
 Ludwick, A. L., Kansas City.
 Luedde, W. H., St. Louis.
 Lund, H. G., St. Louis.
 Lutz, F. J., St. Louis.

 Mairs, E. J., Laredo.
 Maisch, Aug., Manchester.
 *Mangus, T. D., Moberly.
 Manning, D. F., Marshall.
 Marchildon, J. W., St. Louis.
 Marshall, A. H., Charleston.

 Martin, J. B., Russellville.
 Martin, T. A., St. Louis.
 Matthews, F. H., Liberty.
 Max, C. O. C., St. Louis.
 Meisenbach, A. Edward, St. Louis.
 Meisenbach, A. H., St. Louis.
 Meng, E. R., St. Louis.
 *Michie, T. A., Tyler.
 Milem, J. A., Sikeston.
 Miller, A. B., Macon.
 Miller, H. Edward, St. Louis.
 Miller, E. H., Liberty.
 Miller, John J., St. Louis.
 Miller, W. C., Labadie.
 Miller, W. McN., Columbia.
 Mitchell, Guy B., Branson.
 Montgomery, J. S., Milan.
 *Montgomery, Wm. A., Chicago.
 Mosby, C. V., St. Louis.
 More, H. E., Trenton.
 Moore, J. G., Mexico.
 More, Roy D., Clayton.
 Moore, Sherwood, St. Louis.
 Moore, W. G., St. Louis.
 Morfit, John C., St. Louis.
 Mullinax, C. E., Mill Grove.
 Murphy, A. M., Whitewater.
 *Murphy, Mrs. A. M., Whitewater.
 Murphy, R. Brent, St. Louis.
 Murphy, Franklin E., Kansas City.
 Murphy, John C., St. Louis.
 Myers, G. T., Macks Creek.
 Meyer, Jesse S., St. Louis.
 Meyers, W. T., Aldrich.
 McAlester, A. W., Columbia.
 McAlester, A. W., Jr., Kansas City.
 McCall, Green D., Fulton.
 McCandless, W. A., St. Louis.
 McComas, A. R., Sturgeon.
 McComb, J. A., Lebanon.
 McComb, J. L., Lamar.
 McConkey, C. M., Lathrop.
 McKay, H. S., St. Louis.

 Neely, J. E., Elmo.
 Neilson, C. H., St. Louis.
 Newman, S. A., Cassville.
 Nichols, C. B., Mokane.
 Nicholson, C. M., St. Louis.
 Nifong, F. G., Columbia.
 Nifong, Wm., Fredericktown.
 *Norman, J. B., Otterville.
 North, W. R., Webster Groves.
 Norton, Harry B., Center.
 Nowlin, David, Montgomery City.
 Noyes, Guy L., Columbia.

 O'Dell, T. T., Ellington.
 Overholser, M. P., Harrisonville.

 Parman, D. R., St. Louis.
 Parrish, J. S., Pleasant Green.
 Pernoud, F. G., St. Louis.
 Peters, M. L., Cameron.
 Pipkin, W. D., Excello.
 Pitman, J., Kirkwood.
 Porter, Wm., St. Louis.
 Porterfield, E. P., St. Louis.
 Potter, B. B., Lancaster.
 Potter, T. E., St. Joseph.
 Potter, W. A., Lancaster.
 *Pritchell, Paul L., Webb City.
 Platter, A. E., Memphis.
 Poague, Samuel A., Clinton.
 Porter, H. L., Seneca.

- Post, M. H., St. Louis.
 Poston, H. P., Bonne Terre.
- Rabenau, W. J., Fordland.
 Randall, Leslie, Licking.
 Rassieur, Louis, St. Louis.
 Ravold, Amand, St. Louis.
 Reder, Francis, St. Louis.
 Rehfeldt, C. S., St. Louis.
 Reid, H. L., Charleston.
 Reim, Hugo, St. Louis.
 Reynolds, S. H., Maplewood.
 Reynolds, W. T., Kansas City.
 Rhodes, J. W., Pt. Pleasant.
 Richter, Geo., St. Louis.
 *Riley, C. M., St. Louis.
 Robertson, J. M., Bunceon.
 Robertson, W. M., St. Louis.
 Robinson, A. C., St. Louis.
 Robinson, E. F., Kansas City.
 Robinson, G. W., Kansas City.
 Roselle, T. A., Palmyra.
 Rotteck, Julius, St. Louis.
 Rowe, H. J., Willow Springs.
 Ruddell, G. W., St. Louis.
 Rush, G. B., Lathrop.
- Sanders, C. A., Marble Hill.
 Samuels, L., Carrollton.
 *Sappington, W. L., Maplewood.
 Saxl, Ernst, St. Louis.
 Scheele, M. H., St. Louis.
 Scherck, Henry, St. Louis.
 Schisler, E., St. Louis.
 *Schlicht, J. C., Scipio, Okla.
 Schlossstein, A. G., St. Louis.
 Schlueter, Robt. E., St. Louis.
 Schmidt, O. A., Bethany.
 Scholz, Jr., S. B., St. Louis.
 Scholz, P. C., St. Louis.
 Scholz, R. Ph., St. Louis.
 Schutz, W. H., Kansas City.
 Schwartz, F. O., St. Louis.
 Scott, J. M., St. Louis.
 Scrutehfield, G. E., Marshall.
 Seba, John D., Bland.
 Senseney, Eugene T., St. Louis.
 Sevier, R., Richmond.
 Sewing, A. H., St. Louis.
 Seybold, Ira W., Poplar Bluff.
 Shahan, Wm. E., St. Louis.
 Shankland, J. W., St. Louis.
 Shaw, J. W., St. Louis.
 Sheldon, J. G., Kansas City.
 Shelton, J. C., Chillicothe.
 Shelton, M. C., Joplin.
 Shobe, H. G., Jefferson City.
 Shumate, L. St. Clair, Reeds Springs.
 Shutt, Cleveland H., St. Louis.
 Shuttee, H. C., West Plains.
 Shy, M. P., Sedalia.
 Simms, W. W., St. Louis.
 Simon, F. C., St. Louis.
 Singer, J. J., St. Louis.
 Skinner, E. H., Kansas City.
 Skoog, A. L., Kansas City.
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 Sloan, R. T., Kansas City.
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 Spain, K. C., St. Louis.
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 Spaulding, Wm., Poplar Bluff.
- Spencer, Selden, St. Louis.
 Spurgeon, M. E., Red Bird.
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 Statler, W. K., Oakridge.
 Stauffer, W. H., St. Louis.
 Stevens, Chas. D., St. Louis.
 Stroup, E. R., Weatherby.
 Sudduth, J. B., Clayton.
 Swahleu, Percy H., St. Louis.
- Talbott, Hudson, St. Louis.
 Taussig, Fred J., St. Louis.
 Taylor, E. P., Fairfax.
 Taylor, H. I., St. Louis.
 Temple, C. H., Glasgow.
 Thompson, A. W., Chillicothe.
 *Thompson, J. M., Marble Hill.
 Thornburgh, A. H., West Plains.
 Thrailkell, E. H., Kansas City.
 Tilles, Randall S., St. Louis.
 Timberman, John H., Marston.
 Titterington, M. B., St. Louis.
 Todd, L. A., St. Joseph.
 Townsend, W. H., Maplewood.
 Trigg, J. M., St. Louis.
 Tuholske, H. A., St. Louis.
 Tuttle, Geo. M., St. Louis.
 Tuttle, H. W., Adrian.
- Urban, E. T., St. Louis.
 Unterberg, H., St. Louis.
- Vasterling, Paul F., St. Louis.
 Vinward, Paul, St. Louis.
 Vinyard, G. W., Jackson.
 Vogt, W. H., St. Louis.
 Von Grempe, v. A., Iberia.
 Vosburgh, C. H., St. Louis.
- Wade, E. E., Clever.
 Wade, J. H., Ponce de Leon.
 Wallace, Chas. H., St. Joseph.
 Wall, O. A., Jr., St. Louis.
 Walker, G. D., Eldon.
 Walker, R. A., St. Louis.
 Wallace, J. S., Brunswick.
 Wasson, W. B., Nixa.
 Weiss, Richard S., St. Louis.
 Weiss, Wm., St. Louis.
 Weitz, Geo. J., Boonville.
 Welch, J. C., Salem.
 Welch, J. Franklin, Salisbury.
 West, W. M., Monett.
 Wescoat, W. H., Oran.
 Whelpley, H. M., St. Louis.
 White, T. Wistar, St. Louis.
 Wiley, W. H., Ridgeway.
 Wilkes, B. A., St. Louis.
 Williams, J. H., Hume.
 Williams, P. E., Tipton.
 Williams, V. O., Nevada.
 Wilson, E. H. Gregory, Cape Girardeau.
 Winter, Wm., St. Louis.
 Winters, H. S., Oran.
 Witmer, C. M., Marble Hill.
 Woodson, C. R., St. Joseph.
 Woolsey, R. A., St. Louis.
 Wright, J. B., Trenton.
 Wyatt, Douglas, McKittrick.
 Wyatt, F. P., New Florence.
 Yancey, E. F., Sedalia.
 Yost, Walter B., St. Louis.
- Zieber, W. H., Queen City.
 Zahorsky, John, St. Louis.

Total. 538.

*Visitor.

*Visitor.

MISCELLANY

EIGHTH ANNUAL MEETING OF THE MEDICAL ASSOCIATION OF THE SOUTHWEST TO BE HELD AT KANSAS CITY, MO., OCTOBER 7-8

Plans are already well under way for the coming meeting of the Medical Association of the Southwest to be held at Kansas City, Mo., in October. The committee of arrangements have determined to make this the very best meeting that the association has ever held. The section officers are confident they will be able to present an unusually strong scientific program; but this is to be but one of the important features of the meeting as the committee are also planning for a week of clinics in all the hospitals and institutions of the city. These clinics will begin Monday morning and close Saturday afternoon. These clinics are intended for all the members, rather than simply for those interested in some special branch.

Dr. J. A. Witherspoon, president of the A. M. A., is to be present at this meeting and will deliver an address on Tuesday evening before the general assembly.

Kansas City always does herself proud in the matter of entertaining her visitors so that only need be mentioned to assure all who attend a splendid time.

There is still room for a number of papers on the program and a cordial invitation is extended to those desiring to present one to do so. If you wish to accept this invitation, please be prompt in accepting and send your name and the title of the paper to F. H. Clark, M.D., Secretary, El Reno, Okla.

G. W. CRILE, of Cleveland, in Keen's *Surgery*, Vol. VI, p. 158, which has just been issued, gives this technique for his anoci-association: "The patient is anesthetized as usual, but the entire line of incisions is carefully blocked with novocain, including the peritoneum. If then, at the end of the operation and before the peritoneum is closed, there is applied around the entire line of stitches a complete anesthetic block that will last a number of days, such as 50 per cent. alcohol or quinin and urea hydrochlorate, and if in stitching the peritoneum every stitch is placed within this blocked zone, then the afferent impulses caused by stitch irritation are blocked, and hence cannot excite this protective mechanism of intestinal inhibition.

"On trial of this method it was found that such blocking does minimize or even prevent postoperative gas pains in all sorts of abdominal operations. The principle here enunciated has been more or less tested in a series of over 2,000 by myself. In the last 1,000 the death rate has fallen to 1.8 per cent."

THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Clinical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 North Dearborn Street, Chicago Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

MAGNESIUM PERHYDROL.—A name applied to magnesium peroxid (see New and Nonofficial Remedies, 1913, p. 185). Merk & Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

MAGNESIUM PERHYDROL, 25 PER CENT.—A mixture consisting essentially of magnesium peroxid, magnesium oxid with water of hydration, containing not less than 25 per cent. of magnesium peroxid. Its properties, actions and uses are the same as those for magnesium peroxid. Merk & Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

MAGNESIUM PERHYDROL, 25 PER CENT. TABLETS, 7½ GRAINS.—Each tablet contains magnesium perhydrol, 25 per cent., 0.5 gm. Merck & Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

LUMINAL.—(For properties, actions and uses see *Jour. A. M. A.*, May 17, 1913, p. 1541.) Farbenfabriken of Elberfeld Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

LUMINAL TABLETS, 1½ GRAINS.—Each tablet contains luminal 0.1 gm. Farbenfabriken of Elberfeld Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

LUMINAL TABLETS, 5 GRAINS.—Each tablet contains luminal 0.3 gm. Farbenfabriken of Elberfeld Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

LUMINAL-SODIUM.—(For properties, actions and uses see *Jour. A. M. A.*, May 17, 1913, p. 1541). Farbenfabriken of Elberfeld Co., New York (*Jour. A. M. A.*, June 7, 1913, p. 1792).

SOLUTION AMYLENE-CHLORAL (50 PER CENT.) KALLE.—A 50 per cent. solution of a amylene chloral, a combination of chloral with amylene hydrate. It is soluble in alcohol, but insoluble in water. Its actions are much like those of chloral, but with less power to abolish the reflexes and less irritating. Merck & Co., New York (*Jour. A. M. A.*, June 14, 1913, p. 1881).

PITUITARY LIQUID.—Pituitary liquid is a sterile solution containing the active principle of the posterior lobe of the pituitary body of the ox. Each cubic centimeter represents 0.2 Gm. of fresh posterior lobe of the pituitary body in physiologic salt solution. It is said to be useful in cases requiring stimulation of the heart or raising of the arterial tension. It is claimed to be valuable in paralytic distension of the intestines and in postoperative and other pareses as well as in promoting uterine contra-actions during labor. It is supplied as Ampoules Pituitary Liquid, 1 Cc. Armour & Co., Chicago, Ill. (*Jour. A. M. A.*, June 21, 1913, p. 1957).

LUMINAL TABLETS, 1½ GRAINS.—Each tablet contains luminal 0.1 Gm. Merck & Co., New York (*Jour. A. M. A.*, June 21, 1913, p. 1957).

LUMINAL TABLETS, 5 GRAINS.—Each tablet contains luminal 0.3 Gm. Merck & Co., New York (*Jour. A. M. A.*, June 21, 1913, p. 1957).

REFORM IN MEDICINES

BANNERMAN'S INTRAVENOUS SOLUTION.—Bannerman's Intravenous Solution is put on the market by a man who is neither a physician nor a pharmacist and whose only claim to medical knowledge is that of being a horse-doctor. It was first exploited as a cure for consumption and has been known by the various names "Tubercular Solution," "Germicidal Solution" and "Intravenous Solution." It is now sold as a cure-all. The following meaningless and impossible formula has been ascribed to the preparation: Each 10 c.c. of

Bannerman's Solution contains: acid salicylic, 2 grains; hydrargyrum albuminate, 1/9 grain; ferrum, 4 1/4 grains; sodium chlorid, 6 1/5 grains; calcium carbonate, 2 grains; phenol group, 1/25 grain. The claims made for Bannerman's Intravenous Solution are both false and fraudulent. It is a product the use of which appeals chiefly to cupidity and ignorance (*Jour. A. M. A.*, May 31, 1913, p. 1724).

VALUE OF AMMONIUM CARBONATE.—In prescribing for bronchial ailments the primary thought should always be not to give the patient anything that will cause nausea and vomiting. This is particularly true with babies and children. Ammonium carbonate is always irritant. As an expectorant it has no advantage over ammonium chlorid, and as a cardiac stimulant is more or less of a failure. Ammonium carbonate can stimulate the heart or raise the blood-pressure only by irritating the throat, gullet and stomach and may cause vomiting (*Jour. A. M. A.*, June 7, 1913, p. 1792).

PRESCRIPTION NONSENSE.—A mixture containing quinin sulphate, strychnin sulphate, diluted hydrochloric acid, glycerin and pepsin has been recommended for bronchial pneumonia in which there is respiratory failure. With a very sick child the cerebral irritation from quinin is not advisable, unless it is positively needed. This prescription is so intensely bitter that a child 5 years old will reject it. Also, quinin inhibits the digestive properties of pepsin. If strychnin is positively needed it would be better to administer it hypodermically (*Jour. A. M. A.*, June 7, 1913, p. 1792).

HAY-FEVER VACCINATION.—Clowes of the State Institute for the Study of Malignant Disease, at Buffalo, has observed that sufferers from the American or autumnal form of hay-fever are sensitive to extracts of rag-weed pollen. As a result, an attempt has been made in the Buffalo institution to produce immunity against autumnal hay-fever by vaccination. The favorable results obtained warrant further investigation. The dosage of the extract must be regulated with care as it is not devoid of dangerous possibilities and the uninitiated must be warned against over enthusiasm as the entire matter is in the experimental stage (*Jour. A. M. A.*, June 7, 1913, p. 1796).

MANAGING THE DETAIL MAN.—To reduce the nuisance of the detail men and their samples, the Evanston (Ill.) Pharmacologic Society has appointed a committee to whom detail men must present their case, before they will be received by the other members. This method of dealing with the proprietary question indicates that the physicians of Evanston are alive to their responsibilities. Would it not be simpler and just as efficient, however, to accept the findings of the Council on Pharmacy and Chemistry as constituting credentials for the detail man? Many physicians are using New and Nonofficial Remedies for just this purpose (*Jour. A. M. A.*, June 7, 1913, p. 1812).

SCOPOLAMIN IN LABOR.—A few years ago it was proposed to use morphin and scopolamin (hyoscin) in labor and give a sufficient amount to render and keep the patient in a semiconscious state. This plan was tried out in several German clinics but seems to have been generally abandoned (*Jour. A. M. A.*, June 7, 1913, p. 1814).

RESPIRAZONE.—The manufacturers of Respirazone—The Tilden Company—publish an incomplete and therefore meaningless "formula." It is said to be composed of "Iodid and Bromid of Potassium, Helianthus Annuus [Sunflower], Ipecacuanha, Lobelia Inflata [Lobelia] and Leonorus Cardiaea [Motherwort]." Taken even at its face value, Respirazone evidently is a nostrum of the shotgun prescription type, containing, as is usually the case, some obsolete or worthless drugs. The unreliability of the Tilden Company has been

shown by the examination in the A. M. A. Chemical Laboratory of "Hydrocyanate of Iron, Tilden" and by the prosecution by the federal government for misbranding its "Febrisol" (*Jour. A. M. A.*, June 14, 1913, p. 1899).

STAPHYLOCOCCUS VACCINE.—A pure culture of *Staphylococcus aureus*, recently isolated, should be used for the preparation of this vaccine. The "polyvalent" vaccine strains consisting of a mixture of different staphylococci have not been found superior to that of *S. aureus*, alone. The stock vaccine has proved useful in the treatment of chronic furunculosis, sycosis and eczema. It is less valuable in the treatment of acne (*Jour. A. M. A.*, June 21, 1913, p. 1955).

STREPTOCOCCUS VACCINE.—The field of usefulness of stock vaccine of streptococcus is limited. This is due to the large number of strains and varieties which exist. The use of "polyvalent" vaccines is of no avail. While awaiting response to the stock vaccine, the preparation of an autogenous vaccine should be begun. The stock vaccine should be made from *Streptococcus pyogenes* (*Jour. A. M. A.*, June 21, 1913, p. 1955).

THIOCOL AND SYRUP THIOCOL, ROCHE.—Seven years ago the Council on Pharmacy and Chemistry accepted Thiocol, potassium guaiacol sulphate, for inclusion with New and Nonofficial Remedies and more recently also a preparation of it, Syrup Thiocol, Roche. Recently the Council was advised that the product, in the form of a syrup called Sirolin, was being advertised to the public, both in this country and abroad under grossly exaggerated claims. In view of the well-established fact that the most important of all factors in the cure of consumption consists in an early and accurate diagnosis, followed by general treatment, the Council considers that the advertising of a syrup of Thiocol, under the name "Sirolin," involves not merely a serious infringement of its rules but a menace to the public. After submitting the facts to the manufacturers, the Council voted to delete Thiocol and Syrup Thiocol, Roche, from New and Nonofficial Remedies (*Jour. A. M. A.*, June 21, 1913, p. 1974).

THE SARSAPARILLA FETISH.—Twenty years ago sarsaparilla was regarded by the medical profession as a remedy of value. To-day it is never prescribed by the discriminating physician—although it is still one of the standard ingredients in many worthless "patent medicines." Replying to a request to furnish a formula for a "compound extract of sarsaparilla" the *Druggists Circular* for May says: "We can, but know of no reason why we should, and do not believe that we shall." After recommending the separation of the nostrum business from that of the pharmacist's vocation it is suggested: "Fakers will fake; they don't seem to care; but druggists, as followers of an honorable calling, cannot afford to play grim jokes on trustful seekers after health" (*Jour. A. M. A.*, June 21, 1913, p. 1975).

BACTERIAL VACCINES.—A discussion of the indications and limitations of bacterial vaccine therapy is presented by a committee appointed by the Council on Pharmacy and Chemistry. Vaccine therapy is a highly specialized field of medicine whose successful pursuit calls for a particular training in bacteriology, immunology and clinical medicine. The therapeutic possibilities of vaccine therapy have been exaggerated. The promiscuous use of the stock bacterial vaccines of commerce in the treatment of acute and chronic infections is an irrational procedure. Ready-mixed commercial vaccines should be abolished. In cases suitable for bacterial therapy, autogenous vaccines are with few exceptions superior. Autogenous vaccines should be prepared by those in touch with the patient and not through the agency of remote laboratories (*Jour. A. M. A.*, June 25, 1913, p. 2046).

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EDITOR

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M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE PHYSIOLOGY OF DEFECACTION AND ETIOLOGY OF HABITUAL CONSTIPATION*

W. H. STAUFFER, M.D.
ST. LOUIS

The alimentary canal may well be compared to a stream passing through a beautiful valley. Its function of alimentation and elimination are to the human body what the commissary and sewerage are to a city. The health of the individual or community depend very largely on the normal status of said factors involved.

Some knowledge has been had, and some use made of the gift of healing since time and man joined fellowship. Vegetable and the lower animal life, the grass of the field and the birds of the air, all preceded man on the earth. Decay and repair were probably cons old among primitive living forms when God called Adam unto being. Modern medicine is simply a development by man of the essential principles of Nature's resistance against the use and abuse of life's busy day.

Stage by stage we have grown from cell to sentient being. At some point, disease entered the stage astride of sin; hence the intimate relationship existing between physiology and pathology.

Much as we should like to linger on the banks of this canal and study the functions of its municipalities and tributaries, the limited time allotted must be confined to the factors involved in the process of elimination.

Recent advances in the use of radiography in the study of the abdominal organs compel us to readjust, rather reluctantly, our knowledge of the anatomy and physiology of said organs. We must study our patient and his environment, and should not depend too much on the physical and

laboratory findings, however valuable such aids are in arriving at proper diagnostic conclusions.

The act of defecation is very complicated, and is partly voluntary and partly involuntary. Its beginning and completion are, in the main, under the control of the will, while the intermediary stage is the result of involuntary mechanism.

Its location, length, angulation, attachments, curves and the narrow, ring-like juncture with the rectum all help to make the sigmoid flexure the ideal part of the gut, wherein the feces may accumulate and be retained until the time for defecation arrives. After a sufficient quantity of feces and gas have collected in the sigmoid colon, it starts up peristaltic action. As the worm-like movements of the colon become more pronounced and extend along the colon from above downward, the sigmoid flexure, under normal conditions, is lifted up out of the pelvis, and the feces are forced through O'Bern's sphincter into the rectum.

Up to the time the excreta leaves the sigmoid flexure, there is no desire to go to stool; but just as soon as the feces or gas are discharged into the rectum and enter the anal canal, an imperative desire to evacuate the bowel is created. The exact manner in which this peculiar sensation is produced has never been satisfactorily explained. No one has been able to demonstrate clearly what causes it, and it is not known whether it is due to pressure, distention, chemical changes, bacterial action or other causes. I am convinced that the strongest factor in the expulsion of the feces through and out of the rectum during defecation is a progressive invagination, or rolling downward of the bowel into the rectum, which acts like a piston and drives the feces before it, similar to the act as seen in a horse. This action can be observed by inserting a sigmoidoscope and gradually withdrawing it, since the patient strains as if at stool, and the bowel may be seen closely following the instrument down to the anus.

Constipation may be described as a chronic state of the intestine marked by delayed, infre-

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913.

quent, insufficient or irregular fecal evacuations. Obstipation is the name given to a special variety of constipation brought about as the result of some mechanical obstruction, either intrinsic or extrinsic to the free passage of feces through the intestines.

No patient who comes into the office of the average physician is turned away more quickly, with a single prescription for some drug or combination of drugs, than the constipated individual. The condition is one in which a definite diagnosis cannot be made without a careful inquiry into the history, habits and mode of living of the patient, and a most careful and complete local examination.

Because of thoughtless, careless or unscientific medication by practitioners, who are either "too busy" to give the patient the proper time for a careful consideration of his case, or because of a lack of knowledge on the part of the practitioner, who has been graduated from college without any training in the methods of rectal and sigmoidal examination, the majority of patients suffering from so-called constipation have been driven to self-medication by means of proprietary cathartic preparations and have been lost to the legitimate practitioner of medicine.

Some of the most frequent predisposing causes, such as heredity, sex, age, occupation and environment, upright position, chronic invalidism, impairment of abdominal muscles and atony of the intestines, need only be mentioned to be appreciated.

Few children are taught to heed the calls of Nature, and most of them do not evacuate their bowels because they ought to do so; but wait until they must relieve themselves.

The determining causes are among the most important, two of which have been chosen as subjects for this symposium. I cannot refrain, however, from speaking of two, which, in my experience, have not been sufficiently emphasized—namely, irregularity in attending to stool, and inconveniently located and improperly constructed water closets. Some people consider it a great sacrifice of valuable time to spend five minutes in the toilet, while others leave it reluctantly, staying until they finish their cigar or morning paper. The average seat is too high for an adult, to say nothing of the inadequate facilities for children, whose feet do not touch the floor, and who are often compelled to remain with their buttocks wedged in the open seat until they produce results.

The use of enemas, except for temporary relief, is of sufficient importance to command our attention. Experience has taught me that this frequent habit, especially among women, is responsible for at least one-half of all the cases of constipation and proctitis.

An unfortunate custom practiced by midwives, and not a few so-called trained nurses, is to

administer enemas to infants, at stated intervals, to avoid soiling napkins or clothing. It is very difficult to overcome this habit and establish regular function.

Any pathological condition of the bowel, either intrinsic or extrinsic, causing pain or obstruction, is an important etiological factor in producing this frequent symptom.

Last, but not least, the psychic influence governing this daily function must not be overlooked. The physical functions of our bodies are, when normal, subservient to our volition.

A contented mind in a healthy body is essential to our well-being, and is the legitimate heritage of every human being called on to fight life's battles.

204 Humboldt Building.

DIET IN HABITUAL CONSTIPATION*

JOHN M. BELL, M.D.
ST. JOSEPH, MO.

Practitioners who have neglected the study of dietetics as a therapeutic aid have lost sight of a very valuable asset.

Those who dismiss their cases of constipation with a prescription do themselves and their patient a serious injustice. The majority of people who are constipated are curable by dietetic measures.

Before outlining a diet for the relief of constipation, several auxiliary factors must be understood. First, a fair amount of physical exercise; man was not created to live within four walls. Secondly, influences and habits which are depressing to the body must be avoided; normal defecation depends, in a degree, on muscular robustness and proper nerve tone. Thirdly, prompt obedience to the call—a blunted reflex will ultimately become acute if the rectum is kept empty, or is emptied promptly. The alimentary canal is to be considered a hollow muscle and its muscular tone is, in a measure, in accord with the muscular tone of the body at large. Defecation is dependent somewhat on normal nerve reflexes; hence the necessity of a well-balanced nervous system. In fact, in the majority of cases, constipation exists because of a lack of muscular tone in the colon, and blunted rectal reflex. There is a distinction made between atonic and spastic constipation, yet the diet outlined answers in both classes, provided the watery content of the fecal mass is maintained at the proper figure. Normal feces at the rectum should contain 75 per cent. water. If this percentage is preserved, the diet suggested meets all demands. To maintain this percentage of water, the fecal mass must be passed the first time it presents itself at the

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913.

sphincter. A fecal mass with this percentage of water is not too soft to retain its cylindrical shape when passed, yet is sufficiently soft to engage or insinuate itself into even the so-called tight sphincter, and bring about normal and easy dilatation.

The keynote of diet, for habitual constipation, is the selection of food-stuffs containing a large amount of cellulose—woody fiber, which does not digest, but reaches the colon as cellulose—and those food-stuffs which leave distinct bulk of residue, so as to gently stimulate weakened muscles and blunted nerve reflexes. And they must be eaten in abundance, for constipation exists frequently as the result of a too abstemious diet, even with the colon and the rectum normal. Consequently, those foods which are capable of complete digestion and leave little or no residue, such as rice, mashed potatoes, white bread and tender meats, must be used very sparingly. Some discrimination must be exercised even with coarse vegetables; and those essentially flatuous—boiled cabbage and cauliflower—must be excluded. Cabbage, raw, in the shape of cold slaw, may be used; being largely indigestible, its food value is diminished, but the cellulose content furnishes peristaltic stimulation. Bran in some form is to be used every day, either dry with cream and sugar as a breakfast food, or made into muffins, or made into bread. If it is not well tolerated, pumpernickel may be substituted, preferably a day or two old; it must be well chewed. Fletcherism is not advocated, since the degree of mental concentration involved is apt to act perniciously, especially with the neurotic. To complete the breakfast, an egg may be added, with fried potatoes and fruit, preferably fibrous—figs, dates, raisins. In regard to eggs, if there be a distinct indicanuria, animal food of all kinds, except butter and cream, is interdicted for one or two weeks. If there be a neurosis or hyperchlorhydria, coffee is cut off indefinitely, and no fluid but cold water is permitted. The mid-day meal is made up of vegetables, nutritious, yet containing as much cellulose as possible—peas, beans, corn, turnips, parsnips, with whole wheat bread and fresh greens; if in season, lettuce, spinach, celery and cold slaw. Fruit is preferable for dessert, to pastry or pudding. Juicy fruit, or fruit salads are allowed. The diet list must be liberal, otherwise appetite fails and the desired result is lost because of lack of bulk. For the evening meal, fruit alone is most effectual, unless the patient be a mechanical artisan, or a laborer, in which case the noonday list may be repeated. An evening meal of an orange or two, with apples, figs, dates, raisins and fruit salad is satisfying to the appetite and body, and aids peristalsis materially. A whole wheat or bran muffin may be added; also cold slaw or lettuce. The general objection of insufficient caloric value is without foundation in my experience, for this very out-

line is followed in my practice with excellent results. Calories may be increased by means of added butter and cream. The albuminous content may be well maintained by increasing the whole wheat, peas, beans and corn. The only possible objection to be made is the lack of stimulation suffered by abstinence from animal food. This is not complained of for a week or two, in most cases. When it is so, animal food may be added to the mid-day meal. The caloric value is not as much below par as might be imagined, when we realize that a large ripe orange or a large ripe banana contains as many calories of easily digested fruit-sugar as does an average slice of bread. Another objection offered is the frequency of dilated stomach from the bulk of the meal. I fail to find it in my cases. It is quite impossible to create a perfect list for any given case at the first consultation. Results must be noted, and suitable changes made. Such a diet as suggested will make four to five stools daily with some patients, while with others no more than one. Liberal meat eaters sometimes complain of being starved, but the impression is largely mental, for they lose no weight or strength. Coffee is not to be condemned categorically. There are cases in whom coffee creates enough peristalsis for a liberal stool at once after breakfast; when this is the case, unless there be hyperchlorhydria or neurosis, it is permitted once daily. After a period of from one to two weeks, when the coated tongue and malaise have disappeared, when headache and dizziness have gone, when clear mental and physical vigor return, and a habit of two or three daily stools is inaugurated, the diet list is made more liberal. Eggs are permitted once or twice daily, meat every day or every other day at dinner, except in those cases in which the abstinence is not noted; for there are those who do as well indefinitely on a lacto vegetable diet, who indulge in animal food only on state occasions. This applies especially to indoor people—clerks, stenographers, teachers and those who do no physical labor. The remark is frequently heard, "I shall eat no more meat." or, "I feel better without animal food."

For most people the ideal diet is a mixed one: 20 to 30 per cent. protein, 4 to 6 per cent. fat, 70 to 80 per cent. carbohydrate. When peristalsis becomes normal, this standard is to be approached as nearly as the daily life of the patient will permit. Those foods which digest completely and leave no residue, are to be reduced to a minimum, while those containing a large percentage of cellulose, must be insisted on in proportion to the muscular short-comings of the colon.

There are some methods for increasing the watery content of the colon by means of agar compounds, which carry water enmeshed to that viscous. These, like vaseline compounds, have no

place in this paper, for they are not food-stuffs. Nor have I attempted to philosophize on constipation as an entity, but have confined myself to the relation of food to constipation.

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DRUGS AND CONSTIPATION*

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Of all the physical ills to which human flesh is heir, perhaps no other is so frequently encountered and so seldom conquered as habitual constipation.

Many reasons might be assigned to account for such failure on the part of the general practitioner, but as it is not the effort of this paper to discuss this phase of the subject, I trust it may be sufficient to say that apparently more weighty and urgent problems require our time and attention; and as our patients seldom insist on permanent results, they are speedily dispatched with the information to take a dose of salts or castor oil, and to repeat the administration when necessity demands.

Not often do we find a patient who is willing to enter on a course of treatment, medical or otherwise, which is directed to permanently relieve the body of this menacing ailment and effect a cure.

There is every evidence that chronic constipation, whatever may be its cause, is of serious import to the human family, and, therefore, should be of sufficient interest to the medical fraternity to exert a greater effort to control the condition.

Inasmuch as this paper is to treat only of drugs relative to this abnormally performed function of the intestinal tract, I will confine my efforts quite closely to those forms of constipation which have such causes as are remedied by drugs.

Referable to the etiology I have classified habitual constipation into four divisions as follows:

1. Absence of muscular tonicity.
2. Absence of normal intestinal secretions.
3. Absence of normal biliary secretions.
4. Insufficient and improper food ingestion.

I believe it might be correct to state that many cases of habitual constipation often embody any two, or even more, of these causes which I have outlined, and yet by careful study perhaps a single cause could be elicited as primary and the others as resultants.

Muscular atoneity as a cause of constipation may frequently be observed in ptosis of the abdominal structures, excessive fatty accumula-

tions on the intestines, chronic distentions of the mural structures of the intestines, partial paralysis of the sensory nerve fibers in any section of the bowel, and inertia due to general debility and lack of proper blood- and nerve-supply.

The drugs which I have found to be most serviceable are strychnia, nux vomica, belladonna, nitroglycerin and digitalis.

Nux vomica and its alkaloid, strychnin, are well-known drugs in the treatment of debilitated nerves and muscles, as they revitalize all activity, promoting normal reconstruction and regeneration of animal forces.

Even though belladonna reduces the secretory functions of glandular tissue, and, therefore, might do harm in some cases where the secretions are scanty, it is a well-known stimulant to the sympathetic nervous system. In small doses, it increases muscular activity of the intestines, and assists in regulating the blood-supply to the inactive bowel.

It may be somewhat difficult to understand just why nitroglycerin can exert any beneficial effects on a constipated bowel due to atonicity of the muscular structures. It should be understood, however, that muscular strength depends on blood- and nerve-supply, and any drug which has for its function the distribution of nourishment through its action on the vascular system may be responsible for beneficial results.

Digitalis is of unquestionable value in this form of constipation. This drug has long been used as a tonic in weakness of the heart muscle, promoting better circulation to all parts of the body. It thus renders a better blood-supply to the visceral organs, which in turn create natural functional activities.

It is seldom wise to administer these drugs singly in atonic constipation, as a combination of two or more can effect more satisfactory results, since it rarely happens that a single primary cause is present.

By way of digression, let me remark that I do not always favor the "Shotgun Prescription," but the epithet, however, has no death knell peal, for the scientific administration of drugs as therapeutic agents, to me. I am confident that to effect a radical change in the intricate mechanism of the human body, several conditions must often be controlled at the same time, and occasionally the agency of several medicines must be employed.

A combination of medicines, which I frequently employ in these cases, is strychnia, nitroglycerin, digitalis and cactin, the latter drug acting as an assistant to the others.

The second division of the subject, according to the classification given—absence of normal intestinal secretions—is perhaps the one with which the general practitioner most often comes in contact, and for which perhaps he does the least.

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To understand what the treatment should be in such cases, it is necessary to know the pathologic conditions present. It is not always possible to judge accurately of the condition of intestinal structures, and every physician possibly has ideas of his own. Inasmuch as our patients usually recover, autopsies are seldom made for confirmation. Therefore, if the conclusions at which I have arrived do not harmonize with other opinions, I welcome controversy.

In this form of constipation, a dry catarrhal inflammation is often present to cause the secretions to be lessened. The mucosa becomes practically functionless, and the lumen of the bowel becomes slowly filled with fecal accumulations. The stomach contents, in the form of chyme, passes directly through the intestines, causing frequent acid stools, which give the patient the impression that the bowels are not constipated. Frequently, these cases go unattended until the lumen of the bowel becomes entirely filled, and a completely locked bowel is the result; and unless the patient is possessed of much vitality, and the treatment is crowded to the limit of endurance, there is very little hope of recovery.

In this form of constipation heavy doses of oil, often repeated, is the remedy. Castor oil is perhaps the best with which to begin treatment, although I have repeatedly administered olive oil with marked results. Small doses have, in my experience, proved useless. From one-half to 1 ounce of castor oil, and about twice that quantity of olive oil should be given every three or four hours until a thorough evacuation has been obtained. Local applications of heat, best applied in the form of turpentine stupes, are of great benefit in the more severe cases. After complete bowel movement, the treatment for chronic constipation should begin.

It is often desirable to continue the patient on smaller doses of olive oil for a period of weeks, and possibly months, to insure free bowel action and restore the mucous membrane to normal. Castor oil should be discontinued after the first cleansing has been accomplished.

Other drugs which are often necessary to completely restore the functional activities of the glandular system of the bowel are cascara sagrada, calomel, capsicum and the various enzymes which are commercially prepared to assist intestinal digestion.

As a tonic to the glandular system of the bowels, I believe cascara sagrada to be the best and most efficient drug on the market. In the proper doses, carefully regulated, it produces a normal regularity of action and correct functional activity of the mucous membrane. Cascara rarely becomes tolerated by the bowel to the extent of losing its power over the organs, as is so often the case with other drugs. Cascara is usually termed a tonic laxative, which is a true interpretation of its action. It is one of the best

drugs to be used in combination with others, where a complication of bowel disturbances is apparent.

Calomel in small doses, 1/16 to 1/8 gr., two or three times daily for a period of from ten to fourteen days, followed by a period of rest, possibly one week, before resuming treatment, is of great benefit in the restoration of the glandular function.

Capsicum combined in pill form with cascara is a splendid adjunct treatment in these cases.

The various enzymes are useful in maintaining normal conditions while Nature and drugs are making efforts to restore lost function.

The absence of normal biliary secretion is another common cause of chronic constipation. The bile, as a lubricant to the intestinal tract, performs a great service, and when that secretion is lessened in quantity, or prevented from exercising its normal function on the bowel contents by abnormal conditions of other secretions, or improper food ingestion, constipation is one of the results to be encountered.

This deficiency may arise from improper liver function in producing an insufficient amount of bile, or of an abnormal quality, such as a viscid biliary liquid which very tardily enters the bowel; catarrhal conditions of the common duct, obstructing free passage of bile, or gall-stones imbedded within the lumen of the duct, producing the same result.

Of course, some of these conditions cannot be removed by the use of drugs, but where medical treatment is indicated and is to be used, sodium phosphate, in my opinion, is the best for long-continued use. It encourages the free passage of bile from the gall-bladder, stimulates the liver to better action and increases intestinal peristalsis—three of the most important functions of any laxative.

Many cases of constipation show evidence of catarrhal inflammation of the common bile duct, which gradually reduces the lumen of the duct, until abnormally small quantities of bile are liberated within the intestinal canal. For this condition sodium phosphate is almost a specific. Probably no other drug now in use has so mild and at the same time so positive an effect in keeping the bile in a perfect state of liquefaction, thereby preventing inspissation of bile in the gall-bladder and the formation of gall-stones.

As a liver stimulant it rivals calomel in its effect, without leaving any detrimental results from overstimulation. Portal circulation seems to be increased under its administration, and the liver functions are improved.

Among the newer drugs, which has proved efficient in my practice, is phenolphthalein. My experience with this drug, in the last two or three years, would indicate that its action was a liver stimulant of rare quality, and a tonic to the mucosa of the intestinal tract of no mean order.

Its action seems to be much like calomel without any power to overstimulate or to produce any poisonous effect.

The mild chlorid of mercury is an efficient remedy in many of those cases, if properly administered; if not, it is a harmful and dangerous drug. I believe the best results may be obtained by administering calomel periodically in small doses. Often it seems advisable in a sluggish liver to repeat small doses every second night at bedtime, for two or four consecutive periods, lasting perhaps one week, with a week's intermission. Sometimes broken doses every hour until two or three grains have been given, repeating the administration once or twice weekly until the desired effect is produced, gives good and satisfactory results. However, in my opinion, calomel has gained its best reputation for efficiency in these cases at the beginning of treatment, and when not prolonged after its first stimulating and cleansing effect.

Olive oil is an old and reliable drug in these cases, but, as far as I can determine from clinical observation, its beneficial effects are derived from its agency as an evacuant of the bowel and healer of catarrhal affections, both in the mucosa of the intestines and the common bile duct. Even in gall-stones, I attribute the results obtained mainly in facilitating the free passage of the stones through the common duct.

Fringe tree, or *chionanthus*, is another drug in which I have learned to have great confidence in the treatment of this form of constipation. It stimulates the liver to better action, increases portal circulation and is an effective tonic to the intestinal secretions. It is a harmless drug and may be given in any quantities up to free laxation, without injury to the liver function. I have administered it over long periods of time without detrimental effects in any way. For me it has proved a most valuable drug in this form of constipation, and I use it regularly in my practice.

The last division of this subject to which I wish to call your attention—constipation from insufficient and improper food supply—may seem a trifle foreign to the theme under discussion, but this is a common cause for complaint, and often brings the patient to the physician for treatment. Furthermore, all the laxatives and cathartics in our armamentarium will not cure the patient. The trouble is encountered among people who lead an inactive indoor life. We can readily agree that treatment other than drugs would be preferred in such cases, but the seeming necessity of some classes of people to quite rigidly adhere to present conditions, for various and obvious reasons, is enough to enlist the service of medical treatment in an effort to restore human beings to normal health amid abnormal environments. Ill health is often the result of failure to adjust human organisms, with their many

habits, peculiarities and idiosyncrasies, to physical surroundings. The various organs of the body do not functionate properly; the liver becomes inactive and sluggish; oxidation of the blood is inefficient; the kidneys cease in their excretory function, and the bowels become constipated, moving perhaps once or twice a week. On further examination, we learn that the appetite is poor, almost nil. The patient does not feel particularly bad, just somewhat weak, and the bowels do not operate frequently enough. "A little run down in health" is the patient's version of his condition.

What to do in some of these cases is often a puzzling question to the physician. The patient will probably tell you that he has been taking laxatives, but all to no permanent good.

If drugs must be resorted to in such cases, as I have endeavored to describe, the patient should be informed that a regular course of treatment is necessary, and, unless he is willing to be persistent in its administration, it is useless to begin.

The main object, in the treatment of such cases, is to increase functional activities and provide for proper nourishment to maintain them.

General tonics, alteratives and digestives may be used in any combination to suit the individual condition. The bowels must be kept open by the use of light laxatives, regularly administered.

This class of cases is frequently overlooked by physicians in general practice, and turned aside because of the mild nature of the complaint. They are usually office patients in whom we are prone to show little interest, until some grave symptom manifests itself, when perhaps the health of the patient is ruined forever.

Grave responsibility rests on us in such apparently minor ailments. It is comparatively easy to correct this form of constipation when the general system is invigorated, the appetite good and the powers of elimination perfect.

In conclusion, let me assert that the success of any physician, in treating constipation by the use of drugs, depends entirely on his ability to determine the real cause of such ailment and the application of such remedies as are best suited to assist Nature in the restoration of lost function.

SURGICAL TREATMENT OF CHRONIC CONSTIPATION *

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To the critic of surgical procedure no operations in the history of surgery have been more perplexing than those intended to relieve chronic

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constipation. And in attempting to evaluate such efforts we must, unfortunately, largely disregard statistics of results obtained as being entirely useless. Such a statement is not an arraignment of any surgeon or group of surgeons, but is simply a recognition of the frailty of human judgment. If it needs any amplification one may refer to a few examples which have occurred within the memory of most of us.

Ovariectomies have been done by thousands in the past, and even at present the operation is not entirely unknown. In some cases there was thought to be an adequate anatomic basis for it, but in the great majority some indefinite hypothesis concerning physiologic functions furnished the excuse for operating. In many of these cases the clinical results were reported satisfactory, but later more sober judgment has reversed this verdict, and it has been found on reexamination of the premises that our knowledge of the pathology of ovarian diseases is very meager. A reasonable surgical treatment of them is yet beyond our range.

Two of the greatest surgeons of modern times proposed operative measures in epilepsy, basing them on pure hypotheses of the nature of epilepsy, and not aiming at alleviating or removing definite anatomic lesions. Results were not satisfactory, and consequently the hypothesis fell into disrepute. We now know that epilepsy can be treated surgically only when there is a demonstrable anatomic lesion.

The latest example of operations performed without adequate anatomic basis is gastroenterostomy. When there is an actual mechanical reason for it, the procedure is one of the most satisfactory operations in surgery; but when it is done without such an indication the results are disappointing.

These few examples are enough to show that even medical logic can hardly be expected to lead to satisfactory results if the premises are false, and also that statistics when colored by the enthusiasm born of temporary results are likely to be fallacious. They suggest also that unless a surgical operation is directed toward removing or correcting a demonstrable anatomic lesion it will not result satisfactorily. If now, keeping these considerations in mind, we turn our attention to intestinal stasis as a surgical problem, we are led first to examine the facts with which we are dealing.

Constipation in the last analysis depends on an alteration in the relative values of the forces of expulsion and resistance acting on the intestinal contents, and it is by bringing about a readjustment of these forces that one must hope to produce a cure. The problem is complicated by the variability of the forces and by the fact that it often requires the nicest judgment to distinguish between functional disorders and anatomic lesions. The mechanical factors differ in differ-

ent groups of cases, and it becomes necessary to study these groups separately.

Functional disorders. Constipation is often due to inhibition of peristalsis by depressed psychic states, or by lesions which act reflexly on the gut. If such lesions are demonstrable and can be corrected by surgery, they should, of course, be operated. Thus the removal of a kidney stone, the repair of a cervix or the cure of an inflamed prostate, may relieve such a constipation.

Atony. Under this head may be included those cases due to a lack of tone of the neuromuscular apparatus of the intestinal tract. It is usually accompanied by flaccidity of all the muscles of the body. It comprises by far the greatest proportion of constipations. In these cases it is the office of the physician to stimulate the mechanical apparatus by diet and exercise and to lessen resistance by suitable food.

It is in constipation due to reflex influences from a distant lesion that operative treatment is most clearly indicated. The present activity in the treatment of constipation, however, is concerning itself mostly with the correction of demonstrable or hypothetical anomalies of the gut tract itself.

When one considers the ground work on which the recent treatment for intestinal stasis is built, one is met by very embarrassing problems. Mr. Lane, whose enthusiastic advocacy of operative measures is largely responsible for the present furor, defined intestinal stasis as "such delay of the contents of the intestines in some portion of the intestinal tract, but more particularly in the large bowel, as allows of the absorption into the circulation of a larger quantity of toxic material than can be dealt with effectually." This proposes an anatomic problem based on a physiologic test. The anatomic causes of constipation are explained by him as: "1. Abnormal fixation of the pylorus, by the development of a new band. 2. This band may produce a kink which may interfere with the function of the stomach and duodenum. 3. On the under surface of the mesentery of the last few inches of the small intestine a new band may occur which contracts and deforms the ileum, producing a kink or obstruction of this portion of the intestine. In consequence of this kink the small intestine becomes very much dilated and this dilatation may extend up as far as the pylorus. 4. Strong bands of peritoneal adhesions develop between the outer aspect of the cecum and the ascending colon and adjacent abdominal wall with the object of holding up the cecum which in the erect posture becomes overloaded with solid contents. 5. Both hepatic and splenic flexures are drawn upward reducing the lumen of the bowel at these points. 6. Kinking at these points is much exaggerated by the fall of the transverse colon. 7. New-formed bands about the sigmoid contract, con-

verting this portion of the gut into a straight fixed tube. The lumen is subnormal and the muscle is wasted because of this fixation. The left ovary is frequently involved in adhesions which bind down the lower portion of the sigmoid loop. 9. The rectum may be short and dilated or enormously elongated. 10. Deleterious organisms in the small intestines may ascend with occasional infection of the biliary and pancreatic duct."

When we search this list for an anatomic basis for operation we are confronted by serious difficulties. The one reliable sign of chronic mechanical interference with the fecal current, namely, the dilatation and hypertrophy of the portion of gut immediately proximal to the point of obstruction, is always absent in the lesion under discussion. Mr. Lane notes that the entire small gut, even up to the duodenum, may be dilated. It is a difficult matter, however, to say whether this tract is dilated because of the great individual variations and the changing size of the same gut at different times. Shall we operate when we find this gut bigger than we think it should be? Only when the gut proximal to the site of a supposed obstruction is hypertrophied and dilated, is it an anatomic problem and safely surgical. When we operate in the absence of such evidence we must understand that we are indulging in experimentation, and should surround our work with all the precautions required in scientific investigation.

The band near the termination of the ileum which is supposed to fasten down this portion of the gut, has been the most common cause of difficulty to surgeons. It is necessary to determine the state of this region in every case, and in order to do this the normal anatomy must be kept in mind. The terminal portion of the ileum lies normally in the true pelvis and ascends to reach the cecum in 80 per cent. of cases. It, together with the cecum, which it enters, may or may not possess a true mesentery. If, when the intestine is in this low position, one measures its lumen from the interior, no narrowing is apparent. Furthermore, there is no evidence that the decreased mobility in this portion interferes with its normal function. Folds about the terminal ileum are often present in infants, and there is no evidence that they are of importance in the production of infantile constipation. Fortunately, the severing of these folds is an innocent diversion which may be indulged in by the novice and is a convenient procedure when nothing else can be found. It is conceivable, of course, that as the result of inflammatory conditions adhesions sufficiently great to produce obstruction might be produced. Occasionally in acute inflammations, especially where gauze packs are employed, acute obstruction results. We may conceive also that a similar condition might result in a more chronic form. The pericolic bands may be nor-

mally more or less conspicuous. When a part of the cecum is intraperitoneal there must be a ledge where the gut ceases to be intraperitoneal, yet the gut is not narrowed and there is no evidence of constriction. Shall the ledge be severed in constipation? There is no evidence of anatomic obstruction and operation must be performed for "functional" reasons.

If the cecum is low it is proposed to perform cecopexy. Any one who has viewed many abdomens must have been impressed with the astonishing variations in position of this portion of the gut. Any region from the culdesac to the liver may be occupied by the cecum, and yet the fecal current may be carried on perfectly. Mere position cannot, therefore, be a guide. When the sigmoid is fixed, Lane states that the muscle atrophies and disturbs the function of the gut. Fixing the cecum must, therefore, likewise interfere with the muscle wall of this portion of the gut, and is, therefore, contra-indicated if the same logic were applied to both sides of the abdomen. Furthermore, the raising of the cecum forces the ascending colon to become coiled on itself and makes the performance of its function more difficult. This operation, therefore, has no anatomic basis, and the indications for its performance must rest on functional considerations. The cecum is often very large, is said to be dilated and plication is proposed. Does lessening the lumen aid its function? The constriction along its long axis is as important an element of its normal motion as is the contraction of the circular fibers. Plication makes contraction of the longitudinal fibers more difficult or impossible. Putting out of commission a part of the contracting mechanism is a poor way to increase function.

How the pericolic membrane constricts has not been explained. It lies loosely over the gut and can be easily raised up. It has been stated that the gut beneath atrophies and that the intestinal muscle disappears, but no histologic proof of this statement is offered. In the single specimen subjected to examination by Hall, as quoted by Jackson, the gut wall was normal. I have examined many and have failed to find any impairment in the gut wall. In the absence of evidence we are privileged to question the relation between pericolic membrane and constipation.

In the absence of actual narrowing, what is the problem the surgeon must solve? If from any cause the intestinal wall has become weak from impairment of nervous mechanism or from functional weakness of the muscle-coat, the amount of labor can be lessened by shortening the canal and making it straight. By transplanting the terminal ileum into the rectum the resistance to the fecal current can be lessened just as certainly as by a fecal fistula in the beginning of the jejunum. In placing the indications for this short-circuiting operation, radiology has had a promi-

nent part, but, unfortunately, this study has not yet proceeded far enough to furnish sound data. About all we have learned is the falsity of what we previously believed; all the displacements which we formerly regarded as pathologic we now know are compatible with perfect health. The position of the gut is of secondary importance; what it is able to do is the all-absorbing problem. This problem is now in active study by roentgenologists, and something may be learned from observations by means of the fluoroscope of the time and character of the delays in passage of the substances used in making the tests. How nearly such foreign bodies simulate the mechanical conditions of normal intestinal contents is not yet certainly determined.

The tendency at the present time is to apply surgical procedures for the purpose of lessening the resistance to a peristaltic force which has become permanently weakened. However, before a condition becomes surgical it must have been determined that the gut force is permanently weakened, and at the present time we are not able to do this with any degree of certainty.

When we come to recognize clearly that there is no anatomic basis for this class of constipation we may be able to come to some decision as to when an alteration of anatomic conditions is indicated for the purpose of lightening the burden of a weakened gut. Obviously, such an indication cannot be formulated until the exact factors active in a given case are determined. In the presence of a cause which can be removed by medical means operation is not indicated, and unless we find a cause the case cannot be treated logically. The little tinkering operations based on hypothetical conditions are certainly not indicated. If any operation at all is necessary it is an ileosigmoid anastomosis.

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THE X-RAY EXAMINATION IN HABITUAL CONSTIPATION *

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The x-ray has come to be an important factor in the diagnosis of gastro-intestinal diseases. It can furnish evidence on the anatomical position of the abdominal viscera, on the mechanics of normal and abnormal function in the stomach and intestines, on filling defects from intra- or extra-luminal pathology, and, most pertinent to our subject, the mode of the filling of each segment of the gastro-intestinal tract and its motility.

In order to render the stomach and intestines visible in x-ray work, an opaque salt is eaten in

the food. Bismuth oxychlorid, or acid-free bismuth carbonate¹ are satisfactory opaque salts.

The bismuth meal consists usually of two ounces of the opaque material, thoroughly mixed into milk and agar, fermented milks or porridge. Some advise that the intestine should be cleansed by cathartics and enemas before the examination, but we prefer that the patient appear in his usual alimentary condition, since we know that the colonic motility is altered for several days following catharsis. One must be careful not to misinterpret filling-defects due to retained fecal masses.

Sometimes it is necessary to give an opaque bismuth enema in the study of filling-defects of the colon. Such an enema may consist of bismuth, Fuller's earth and water. A thorough cleansing of the colon by catharsis and an enema should always precede the opaque enema.

The x-ray examination may be made either with the fluoroscope or by a series of radiographs at regular intervals. Serial radiography only provides information on the position of the opaque meals, with the possibility of estimating filling-defects. Fluoroscopic examinations are of more importance, as they not only provide all that serial radiography outlines, but, in addition, (1) the change in position of the viscera by voluntary movement of the abdominal muscles and diaphragm, and (2) the ability to palpate the abdomen during the examination. Fluoroscopy is much simpler and less expensive than to take a number of x-ray negatives.

The x-ray examinations should be made both in the upright and horizontal positions. Innumerable designs of apparatus have been constructed. Every radiologist develops his own mode of procedure and adapts it to the needs of the case in hand. At this time we should all know the intimate attention that x-ray protection demands. While there is no danger to the patient who undergoes a few examinations, the radiologist must surround both the x-ray tube and himself with modern devices for protection.

In approaching the x-ray examination of a constipation case, it is always best to make observations on the filling, position, peristalsis and emptying rate of the stomach. Such information is always valuable in arriving at diagnostic conclusions or therapeutic suggestions.

The usual time for the passage of the bismuth meal in the normal individual is approximately as follows: The stomach is empty in five to six hours; the cecum should be reached in about four and one-half hours; in eleven to sixteen hours all except occasional traces of bismuth should be in the descending colon; in twenty-eight to thirty-

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913.

¹ Barium sulphate, highly purified, may be used to obtain evidence of position, but its rate through the stomach and intestines is faster than bismuth, and may mislead the observer who has developed a technique with bismuth salts.



Figure 1.—X-Ray exposure of the abdomen of a clinically normal individual. Upon this negative the splenic and hepatic flexure appear sharply angled, but fluoroscopically there was a good filling of the entire lumen of each flexure.



Figure 3.—Case No. 3269; same case as Figure 2. This negative was taken twenty-four hours after the last bismuth meal and shows the filling of the cecum to be scanty. The hepatic flexure and first portion of the transverse colon are well filled. There is a large shadow in the sigmoid (marked S).



Figure 2.—Case No. 3269; Cecal Constipation. The filling of the gastro-intestinal tract after bismuth meals administered twenty-four and six hours previously. The head of the twenty-four hour meal has just entered the descending colon. The hepatic flexure and ascending colon are well filled. There are scattered masses along the transverse colon. There are shadows of gas in the splenic flexure and at the apex of the hepatic flexure. The six-hour meal shows the residue in the stomach, probably because this man took an interim meal by mistake.



Figure 4.—Case No. 3269; same case as Figures 2 and 3. This negative was taken forty-eight hours after the last bismuth meal and shows a complete filling of the cecum, hepatic flexure and first portion of the transverse colon. Two small bismuth masses are seen on the sigmoid. It will be noted that there is a larger filling of the proximal colon at forty-eight hours than at the previous examinations. This patient continued to show shadows in the proximal colon for fourteen days.

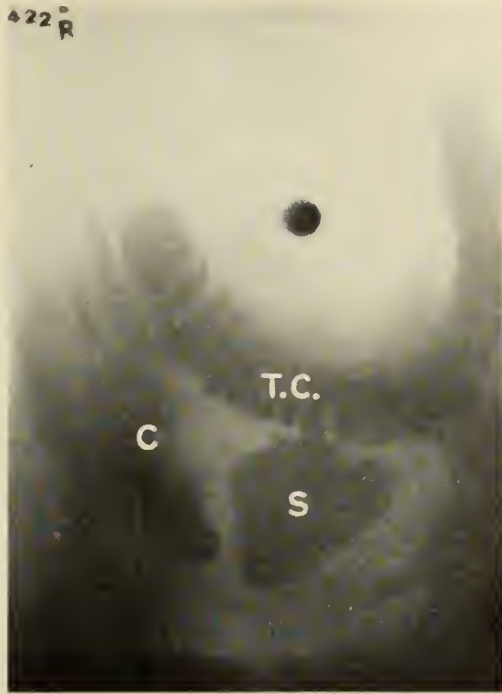


Figure 5.—Case No. 1422; ptosis constipation with atonicity. This shows the filling of the colon twenty-four hours after a bismuth meal. The cecum is scantily filled. The transverse colon is very completely filled; the haustra being especially well filled. The sigmoid shows a mass filling. This patient continued to exhibit shadows in the transverse colon for many days.



Figure 7.—Case No. 664; same case as Figure 6. Shows the same case twenty-four hours after the last bismuth meal. The cecum shows only a few faint shadows. The descending colon is sparsely filled and the sigmoid shows a large filling.

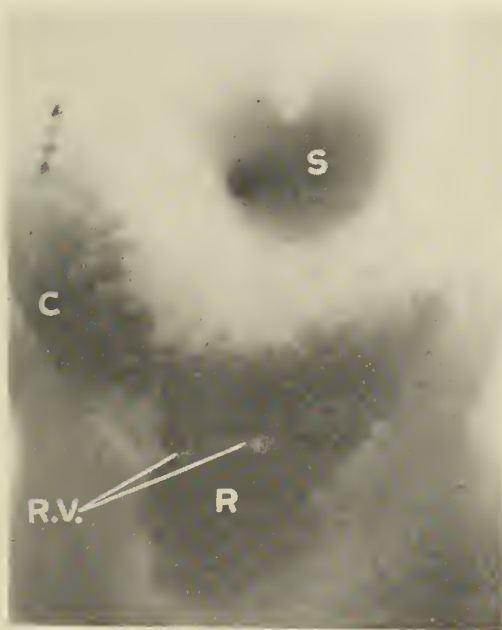


Figure 6.—Case No. 664; Dyschezia or rectal constipation. This negative was taken twenty-four hours and fifteen minutes after bismuth meals. We see the greater curvature of the stomach just below the umbilicus; the cecum is partially filled; the transverse and descending colon shows scanty shadows and we find the rectum dilated with a large bismuth mass shadow with indications of the rectal valves (marked R. V.).

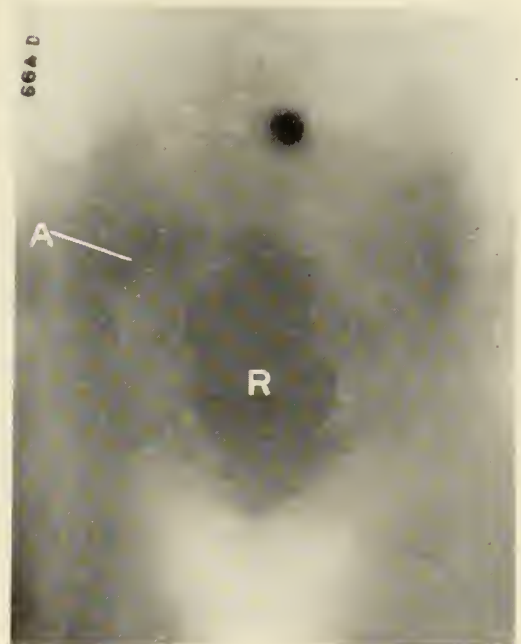


Figure 8.—Case No. 664; same case as Figures 6 and 7. Taken seventy-two hours after the last bismuth meal. This negative shows the colon to be practically empty with the exception of a large filling of the rectum and a small filling in the appendix (marked A).

two hours it should be in the sigmoid, where it remains till defecated.²

The importance of the x-ray examination in constipation can hardly be overestimated. By this method alone can the constipation due to slow passage of the feces through the intestine be differentiated from that due to faulty defecation and rectal retention. The exact part of the colon at fault can also be determined. The presence of strictures, adhesions and malpositions, which may cause or complicate constipation, is clearly demonstrated.

"Every day we meet patients with moderate or severe grades of constipation, not due to obstructions from tumors. . . . In previous examinations, chemical tests for motility of the stomach and the intestine have been unreliable. . . . The entire length of time that food takes to pass from the mouth to the anus can be determined by the ingestion of indigestible and non-absorbable foods or chemicals, such as bismuth salts, which can be recognized in the stools. This does not indicate, however, the length of time consumed in digestion by different portions of the alimentary tract, and is often inaccurate in

also closely associated with acute and chronic pathological lesions in the stomach, duodenum and gall-bladder, where there is an irritation of the vagus nerves, producing hypertonicity and hypermotility of the gastro-intestinal musculature. In this type of constipation, we find that the colon is normally placed in the abdomen, and that six hours after a bismuth meal, shadows can be seen as far as the descending colon. The rest of the bismuth is distributed throughout the cecum, ascending and transverse colons. At the end of twelve and twenty-four hours, the opaque shadows in the cecal and hepatic areas are increased in size, and there is little, if any, filling of the pelvic colon. This phenomenon is due, undoubtedly, to the antiperistalsis of the colon. This type of constipation must be differentiated from a gastric achylia, spasm in the pelvic colon and inflammation or adhesions about the sigmoid flexure.

2. Ascending type of constipation, or the cecal type of habitual constipation. This is a form of constipation in which, six hours after a bismuth meal, we find the terminal coils of the ileum well filled with bismuth and a small cecal shadow.

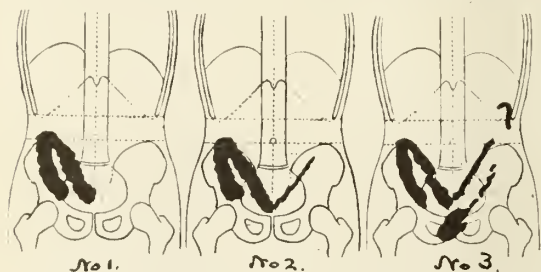


Figure 9.—Case No. 4144; sketches of a case of colonic constipation. Distinct evidence of obstruction from adhesions about the transverse colon (No. 1) were demonstrated by the fluoroscopic examination which shows the bismuth meal at the end of twenty-four hours (No. 2), at the end of thirty-two hours and (No. 3) at the end of forty-eight hours. At the operation, it was demonstrated that these adhesions were between the middle portion of the colon and the sigmoideo-rectal junction.

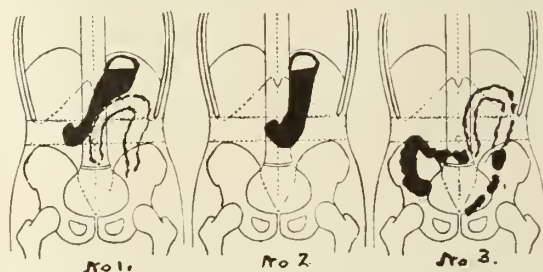


Figure 10.—Case No. 3731; Sketches of a case of colonic constipation. No. 1 shows the filling of an otherwise normal stomach distorted along the shadow of the greater curvature by a gas collection in the colon. No. 2 shows the stomach immediately after the patient had passed a large amount of gas. No. 3 shows the same case twenty-four hours after a bismuth meal. The bismuth shadows show a good filling of the cecum, hepatic flexure and transverse colon to a point just to the left and below the umbilicus, at which point a large sausage-shaped shadow of air describes an oval loop with its convexity toward the diaphragm. The distal end of this gas shadow terminates at about the crest of the left ileum in close proximity to the proximal end which was to the left of the umbilicus. There were a few bismuth shadows in the descending colon. At the operation the omental apron presented adhesions to the cecum which produced the tension upon the colon and promoted the obstruction.

determining the time of digestion. Tests for determining residual food in the stomach are tedious and very annoying to the patient, and determine only approximately the final result. This, with our other important data, can be shown by the Roentgen ray.³

Habitual constipation is usually a matter of faulty motility of the large bowel. The motility of the small intestine is never slowed in a functional constipation and there are very few organic conditions which affect its motility.

We may divide habitual constipation into several types, which are determined by characteristic x-ray findings:

1. Hypermotility of the proximal or first half of the colon, with a great amount of antiperistalsis of the colon and small, hard, scanty stools. This type has been called a greedy colon, and is

There is slow progress at the twelve-hour interval, except that the terminal ileum is empty and the ascending colon becomes filled. In the twenty-four-hour intervals we find the cecum filled and distended, and probably dropping into the true pelvis. The appendix may show shadows; the transverse and descending colons may show scant shadow; shadows of bismuth remain in the proximal colon as long as three to fourteen days. This is the type of constipation in which there is a history of recurring appendicitis in the male, and ovarian and tubal symptoms in the female. It is the type found in ptosis of the proximal colon, with a poor motility due to weakness of the intestinal muscles and of the abdominal wall.

2. Hertz: Constipation and Allied Intestinal Disorders, Oxford University Press, New York.

3. Lewald and Satterlee: Jour. A. M. A., 1911, lvi, 1255.

3. The atonic ptosis type of colonic constipation. This type shows practically the same findings as the previous type, with the addition of anatomical disturbances, such as the low position of the hepatic and splenic flexures. There is undoubtedly colonic stasis in these cases, for we have been able to show bismuth residues in the ileum twenty-eight hours after opaque meals, and colonic stasis of five to fourteen days' standing. This is the type of constipation found in congenital visceroptosis.

4. The dyschezia of Hertz, or rectal constipation. This is the most common type of habitual

false modesty, rectal fissures and hemorrhoids. This type of constipation is rarely found on the continent where false modesty prevaleth not, but in America and England the hygiene of rectal elimination is not a matter of regularity or ease of accomplishment (in Europe, the public comfort station is popular and omnipresent). The false modesty of overcivilization is an important factor in the development of rectal constipation or dyschezia. It is interesting to note the x-ray findings in these cases after a rather prolonged course in rectal hygiene, following the daily injection of an oil to soften the fecal masses and reestablish the rectal reflexes. These cases of dyschezia often exhibit a most astonishing array of toxic and neurasthenic symptoms, and they are difficult to distinguish from other types previously described without the x-ray study of the case.

We believe that the above four or five types of non-organic, purely functional, habitual constipation are sufficient for the present symposium. Symptom-complexes, closely approximating the above, are displayed clinically, but they are demonstrated by the x-ray to be dependent on distinct organic adhesions, kinks, intraluminal or extraluminal pathology, both malignant and benign.

We believe that the most satisfactory means of studying habitual constipation is with the x-ray, since by this means alone can we demonstrate the colonic motility and topography to the satisfaction of the internist and surgeon. The crucial point is the interpretation of the x-ray shadows, which can only be accomplished after study and experience in the normal and abnormal colonic disturbances of motility, function and anatomy. In ending this tax on your patience, may we prophesy that the x-ray study of colonic efficiency and the contrary, is just beginning to reveal to the surgeon and the internist a means of diagnosing and prognosing their cases, and controlling the therapeutic measures employed.

Rialto Building.

DISCUSSION

Dr. R. H. Barnes, St. Louis: Most medical men when they discuss constipation lose sight of the causative factors and the conditions that are really present. No one should attempt to treat constipation until he has some idea of the real conditions that are present. I believe the varied treatments that we find advocated are often the result of jumping at conclusions before really a diagnosis is made.

We want to remember the large number of inflammatory processes that produce a number of lesions and conditions that should be considered, for you will find that most of those who are habitually constipated have at different periods histories of inflammatory processes of the intestinal tract. Another cause, mentioned by Dr. Skinner, is found in the rectum and anus. There are a great many conditions there, simple to treat, that are frequently overlooked by the general practitioner. The x-ray has outlined more real conditions than any other method of diagnosis up to this time.

Diet is very important. I believe that knowledge which we will obtain in a short time with regard to



Figure 11.—Negative made after bismuth meals twenty-four hours and immediately preceding the exposure. Extreme degree of ptosis. The greater curvature of the stomach reaches almost to the symphysis pubis and the transverse colon skirts the pelvic brim. The cardiac end of the stomach is not included in the picture.

constipation among the American and English people. We find in this type that the bismuth meal reaches the pelvic colon in the usual length of time, i. e., about twenty-four hours, but the fecal residue collects in the sigmoid and rectum from a failure of the individual to carry out a rational rectal hygiene. In this type of constipation, the fecal masses in the sigmoid and rectum will become of an enormous size, and it is doubtful if these patients ever have a complete emptying of the distal portion of the large intestine. The use of cathartics in these cases is absolutely contra-indicated, because they only increase the motility of the proximal colon, which is already sufficient to carry the feces from the cecum to the sigmoid. In dyschezia, we have an otherwise normal motility of the colon, but a decrease of the rectal reflex and impulse to stool. This dyschezia usually results from faulty hygiene, carelessness in attending to Nature's demands,

the intestinal flora (bacterial findings) is going to play a great part in the treatment of these conditions of which constipation is a symptom. To-day we are not able to use such information successfully. I do not believe in a cellulose diet as routine treatment of constipation. I think it is incorrect, even in cases due to atony. As a rule it is bad policy to overstimulate an overworked bowel. We had better search more definitely for the cause and treat the cause. We all know the mixed diet is the best, generally speaking. Any modification should be done only when we have a definite reason. A non-irritating diet is generally a proteid diet and will have a more beneficial effect by resting the lower bowel than filling your patient with a lot of refuse and overwork a tract that is not functioning properly.

Dr. Frank Hinchey, St. Louis: I do not want to let go wholly unchallenged the statement of my friend, Dr. Barnes, in regard to the cellulose diet, or gritty diet. It is a known fact that the inhabitants of India, who never see meat—except possibly in the shape of a tiger—never eat meat, but subsist entirely on vegetable and rough, coarse diet, have an intestinal tract several feet longer than that of the European, and their large intestine is likewise longer than that of our race. This increased length of the intestine is necessitated by their coarse diet, and the fact of interest to us is that they always have more than one stool daily. Constipation is unknown. It seems as though the condition of a constipated dog would also rather speak against the argument of Dr. Barnes, while we do know that the patients who are fed bran biscuits, or bran and flour mixed, have oftentimes relief from constipation: so I feel we ought not to adopt this belief that a very marked change in the diet is not a good thing.

Dr. A. H. Meisenbach, St. Louis: I do not wish to discuss the subject of constipation. I wish to make a motion. One of the most important contributions to this subject, in my estimation, has been the paper of Dr. Skinner of Kansas City. We all know his work in relation to radiography in intestinal diseases, and I would move that, inasmuch as the conditions of the hall are such that he cannot show his plates to-day, they be shown at the evening session and the committee on arrangements be instructed to give him opportunity to show his plates.

Motion seconded. Carried.

Dr. T. F. Lockwood, Butler: In treating constipation we country physicians perhaps notice little things and learn lessons therefrom which the city physicians do not observe. Physicians in the country do much driving, and I have never owned or driven a horse so modest but that it would stand for hours, perhaps, in the barn without defecating; start out and drive a block and he will defecate; drive him a few blocks further and he will defecate again. Some horses driven ten miles or more will take a profuse diarrhea, a watery discharge. Now, there is a reason and a lesson to be learned from that, and that is the movement, as you know, in driving produces a peristaltic or increased peristaltic action of the intestines. The horse will have a watery discharge; not that the glands have been stimulated, producing this fluid, but the peristaltic movement of the bowels has hurried the water from the stomach through the intestines before it has had time to be assimilated, and, therefore, you get a profuse diarrhea. Bowel massage is a wonderful thing in the treatment of chronic constipation. If you cannot do this yourself, teach your patient to do it. Massage the bowels thoroughly. Do this every day at a certain hour. Use an enema if necessary as a starter. Do this just before they take the massage and impress on the patients that they must go through this same process every day at a certain hour and keep it up, whether they feel they want to go to stool or not; have them practice this

to establish a regularity in going to stool and by and by they will form the habit of having the bowels act at a certain time every day and overcome the constipation.

Drugs have but little efficacy. True, they stimulate the bowels, but, after all, that is a habit. You get the bowels in the habit of moving at a certain hour from the effects of the drugs, and after a while you can leave off the drugs and the habit will continue; but the same cause that brought about the condition at first will operate again and they will drift back to where they were. Casarea, as has been said, is one of the best drugs for chronic constipation, because you get a slow action of the drug and you come nearer establishing a movement according to nature; but even casarea fails, and if you can use natural methods in bringing about a bowel movement you come nearer curing the patient permanently than you can with any known drug.

Dr. J. P. Kanoky, Kansas City: I have been very much enlightened, and have learned considerable to-day in regard to constipation. I know very little about it, but I can ask quite a lot of questions. One of the things that I would like to know is, is constipation acquired, or is it hereditary? If it is acquired, there must be a cause for it. Was that cause medicine, or was it food, or was it neglect? If the cause is the product of improper dietary measures, improper foods, then can you cure constipation without correcting that one particular thing? You may relieve constipation with a drug, but can you cure it? I have come to the conclusion that if constipation is a product of improper foods producing toxins which weaken the nervous system, and the resistance of the mucous membrane of the intestine and other organs, then the way to get at it is that you must give your patient a food that will produce the least toxic condition.

I am satisfied that radiography is one of the great aids and one that we will look to possibly as much as we will to the pathological chemist to determine the condition presented by constipation.

I had a very good illustration of this about ten days ago. A Sister of Charity who came to me with a skin trouble, after questioning her regarding her physical conditions, told me she had suffered from constipation for something like eight years. She had been for five years under treatment for constipation under physicians from the Pacific Coast to Kansas City. She stated that at times she had not had an evacuation of the bowels for as much as a week, had taken as much as eight compound cathartic pills at a time, and of a preparation of phenolphthalein had taken five to six tablets at a time, and casarea as many as five tablespoonfuls at a time, a half glass of the syrup of casarea, and as much as four tablespoonfuls of the extract. Now, that woman lacked a good deal of being well. I sent her to Dr. Skinner. He made a fluoroscopic examination to learn the cause of the constipation. He found no trouble with the stomach, no gastritis, no abdominal adhesion, no intestinal adhesions, but she had practically a paralysis of the colon. There was an atonic condition of the colon that permitted the accumulation of the intestinal contents for days. You could have fed that woman a bale of hay every twenty-four hours and you could not have moved it out. No matter how much roughening you gave her, the roughening would stick. So, you are not going to cure by giving a lot of cellulose.

I believe that in these cases of chronic constipation we find that oil is not used nearly as much as it should be. I don't refer to castor oil—I mean olive oil, or albolene.

The question of chronic constipation has not been solved yet. I hope we are on the road. Dr. Hall has given us one of the best papers I have heard on the use of drugs in constipation, but, after all, drugs are bound to do what? whip up an already

sore, tired and worn-out intestinal tube; that is all. It is a make-believe, not a cure. Take a man when he is tired and worn out from carrying a load, give him a great, big drink of whisky and he will stagger on a while longer, but it won't make him a well man; neither will the drug.

Dr. O. B. Hall, Warrensburg, in closing: It is perfectly true that we feel sorry for the constipated individual. There is no question about that at all, and it resolves itself into this, it seems to me: There are two things to do in this case, the same as in every other; the first one is to make our diagnosis, not in a general sort of way, but specifically and absolutely, so that we may know how to proceed; secondly, of course, is the procedure. Sometimes it may be medicine, sometimes it may be massage, sometimes it might be hydrotherapy, it might be surgery, it might be something else. Don't forget that diet is very important. All these measures are absolutely essential. We might talk all day on the various causes and all night on the various treatments, and still never get anywhere. We as individuals, practitioners of medicine, ought to understand sometime in our career how to diagnose a case and what to do for it. If we cannot diagnose it, let's send it to some one who can; if we cannot treat it, let's send it to someone who can, and give the patient the full benefit of our sense of ethics.

GAUZE OR RUBBER-TUBE DRAINAGE FOR THE PERITONEAL CAVITY *

H. J. JURGENS, M.D.
EDINA, MO.

The principles of peritoneal drainage have been established on a firm basis for so long a period that it seems almost superfluous to devote any time to the consideration of this subject at this day.

Nevertheless, considering the fact that during the last International Gynecological Congress, at Berlin, the master gynecologists of the world devoted a whole day to the discussion of the various phases of peritoneal drainage, we must conclude that the last word has yet not been spoken.

To argue on a scientific basis, we must consider the natural resources at the disposal of the surgeon. We have access to these in the histology and physiology of the peritoneum.

I shall not burden you with minute anatomical details, but simply ask you to call to mind the histology of the diaphragmatic peritoneum as described by Muscatello almost twenty years ago. There is no dispute at this day as to his findings regarding the presence of stomata between the endothelial cells, nor with the further facts that these stomata are the mouths of lymph-spaces leading into the mediastinal lymph-vessels and glands. Neither is there any question as regards Muscatello's findings in the physiology of the peritoneum—we concede at once the actual presence of a lymph-stream commencing low down in the pelvis and extending toward the diaphragm, the rapidity of which is not even entirely

overcome by placing the body in the upright position.

I will, furthermore, not burden you with the modus operandi of immunization, as described by Wright, except to call attention to the fact that the lymph-stream again constitutes a remarkable factor in the process of the manufacture of opsonins, remembering that in normal conditions the leukocytes are not numerous enough to prepare a sufficient amount of so-called enzyme to digest an invading army of bacteria; so that we expect the lymph-stream to furnish us with an increased number of neutrophiles.

It is, furthermore, not my intention to discuss the anatomical make-up of the abdomen in regard to the formation of various fossæ, the capacity and drainage difficulties of which were so well described by Bartlett a few years ago. I simply wish to call your attention to these facts as bearing on the problem in hand. With these facts in view, Fowler originated his elevated position, which probably constitutes one of the main factors in the fight against absorption; while naturally the drawing off of septic fluids further enhances the effort that reduces absorption, and hence we have been attempting to introduce material into the peritoneal cavity which would diminish the amount of foreign and septic material.

How well we have succeeded, need not be mentioned. Nevertheless, I presume that in fatal cases occurring in one's practice, the question often arises: Was there efficient drainage? Five or six years ago, I thought I had settled that question in my mind, following the Moynihan plan of tube-drainage, so well elaborated by the Mayo's, for the upper part of the cavity. I presumed then, that tube drainage was the established thing, yet a few years later we find Moynihan again using gauze in the upper abdomen, whilst others condemned this material in this region as being particularly obnoxious to the duodenum, pylorus, colon and other organs in the neighborhood, favoring the formation of ileus. I have felt that way myself since I lost a cholecystotomy case from ileus ten days after operation, when apparently my patient was progressing nicely. I have heard of similar experiences in the practice of some of my colleagues, so that now I have reverted to dressed tubes for the upper part of the abdomen. In the cecal region I have abandoned tubing and instituted gauze, because I felt that in many cases the presence of the tube caused considerable reversed peristalsis and irritability of the stomach. However, it is not a question of one's personal preference, but an analysis of scientific facts that interests us.

Why then should tube drainage be preferable to gauze in the upper abdomen and *vice versa* in the lower abdomen?

To drain any cavity by tubing, the draining point should be at the lowest level of the cavity to be drained. Uphill drainage without osmosis

* Read in the Surgical Section of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913

and siphonage is impossible, so that, strictly speaking, tubing should be used only where the external mouth of the tube can be placed on a lower level than the internal one, as is often done in drainage through the loin. Furthermore, clinical experience shows that Nature walls in the tube by connective tissue so that in a few days a canal leads from the surface to the recesses internally. What does that mean? It means that a wall of connective tissue, consequently a wall made up of a firm, unyielding substance, without any or with but few lymph-spaces, is thrown around the tube. It means that the lymph-stream is prevented from bringing on, at that particular point, fresh numbers of leukocytes; it means, consequently, a less amount of opsonization.

Quite different, however, is the condition of affairs when gauze is inserted. Here we have a material which possesses capillary action, therefore, drains uphill. It is true that connective tissue is also formed around this material, but through the capillary action of the gauze, the lymph-stream is accelerated instead of obstructed, allowing new leukocytes to be brought on, and consequently enhancing the chances for the formation of enzymes to digest the invading hosts.

You may contend that the same theory holds good for both the upper and lower abdomen. There is, however, this difference: in the upper peritoneal cavity the posterior wall of the abdomen is less concave, being filled in by the kidneys and psoas and iliacus muscles, hence the cavities are not so deep, and the possibility of the pocketing of pus not so great as in the iliac fossae.

Particularly is this true of the true pelvis, and I presume that on that account gynecologists use gauze material exclusively for vaginal drainage. In summing up then, I wish to offer these conclusions: First, that physiologically, gauze is preferable to tubing; secondly, that tubing is to be preferred in walled-off cavities where a low drainage point can be established; thirdly, that in the upper abdomen, tubing surrounded by gauze to give capillary action and enclosed in silk is superior to gauze alone on account of the extreme sensibility of the pylorus, duodenum, colon and other organs; fourthly, that in the pelvis, gauze is to be preferred, because the level of the cavity in the horizontal position is below the outlet of the vagina, and on account of the danger of the tubes to the intestines.

DISCUSSION

Dr. T. E. Potter, St. Joseph: There is a form of drainage that I use for the upper or lower portion of the abdomen, a combination of the rubber tube and gauze, that has, in my hands, served well. Take a rubber tube the size and length you desire, split it from end to end, open the tube, and place in it a strand of either plain sterile or iodoform gauze having the strand of gauze considerably longer than the tube, so the end out of the abdomen will reach to the bed

when the patient is lying on the back; this throws the distal end of the strand of gauze lower than the bottom of the part desired to be emptied and, like a siphon, it draws out the fluid, especially the liquor puris or serum.

In gall-bladder operations for stones or cholecystitis, where the bladder is contracted and so short that it is impossible to make ventral fixation, or so soft that the stitches will not hold, I find the tube and gauze fixed as I have described, inserted into the gall-bladder and secured there by catgut stitches, then the omentum folded around the tubes and gall-bladder and brought up to the abdominal wall and secured with stitches, will hold its position. It soon forms a gutter around the tube, and in this way forms a sinus that will allow the bile to escape without any of the biliary secretion escaping into the abdominal cavity.

Draining in this way prevents adhesions between the gauze and any of the contents of the cavity, and when the tube and gauze are removed a sinus is formed that will allow any fluid to escape so long as is necessary.

Dr. T. J. Beattie, Kansas City: I certainly agree with the essayist in his ideas on drainage. I believe I would have to differ from Dr. Potter in one respect. I cannot see why he uses the rubber drainage tube, split, with gauze in it, and then passes the gauze down below that; if he would wrap the gauze with rubber dam it seems to me he would get what he is after.

In reference to draining the gall-bladder, I don't see why he uses gauze drainage; if he brings it up, protects it thoroughly and then uses rubber tubing well protected, it seems to me it would be better.

I surely agree with the essayist in his ideas on drainage.

Dr. H. J. Jurgens, Edina: In reference to Dr. Kiefer's argument, that gauze as soon as it becomes dry acts as a plug. I only wish to say that the peritoneal fluids will keep the gauze moist and, of course, it will be necessary for the attendant to keep the dressings moist, and for that kind of dressing moist carbolized gauze is best.

As to what Dr. Potter said, I would like to ask him if he has never had any trouble with the omentum forming processes into his groove in the tube and getting into it in addition with the gauze, so that when you pull out the tube you get away your tube, but the gauze is still adherent.

Dr. Potter: It comes away with the tube easily.

Dr. Jurgens: Have you never had the omentum become fastened to the tube when the gauze is exposed in the cavity with the tube?

Dr. Potter: I don't put the gauze down very far. It has been very satisfactory.

OUR STATE HOSPITALS *

WILLIAM F. KUHN, M.D.
KANSAS CITY, MO.

In discussing the condition and methods of our state hospitals, we will understand their needs better if we approach the subject in a practical and concrete manner, and in this discussion it is not a question of men or physicians who may have charge of these institutions, but of the conditions and methods in vogue.

Let us examine some plain facts and we will readily see and understand the absurdities in the procedures that have brought about these con-

* Abstract of a discussion on the subject of our State Hospitals at the Annual Meeting of the State Medical Society, May 14, 1913.

ditions. For convenience, I will assume certain statistics that are sufficiently correct as a base for reasoning.

There are admitted into our state hospitals men and women suffering from one of eleven forms or groups of insanity. While this grouping is somewhat arbitrary, yet it will answer the purpose for the discussion. The manic-depressive group represents 30 per cent. of the admissions, of which about 30 per cent. recover and 25 per cent. are improved. The toxic group represents 14 per cent. of the admissions, of which 50 per cent. recover and 10 per cent. are improved. The infectious-exhaustive group represents 6 per cent. of the admissions, of which 35 per cent. recover and 15 per cent. are improved. The psychoneuroses group represents one-half of 1 per cent., of which 25 per cent. recover and 25 per cent. are improved. The dementia praecox group represents 21 per cent. of the admissions, of which none recover, but 20 per cent. are improved. Involuntary melancholia represents 9 per cent. of the admissions, of which 12 per cent. recover and 25 per cent. are improved. The epileptic group represents $4\frac{1}{2}$ per cent. of the admissions, of which none recover, but about 5 per cent. are improved. Paranoia represents one-half of 1 per cent., of which none recover and none are improved. Paresis represents 4 per cent. of the admissions, of which none recover and none are improved. The senile group represents 10 per cent. of the admissions, of which none recover, but 25 per cent. are improved. The amentia group represents one-half of 1 per cent. of the admissions, of which none recover and none are improved.

In the eleven groups of insanities, we, therefore, find only five in which there is a possibility of a recovery; six groups are absolutely hopeless of recovery, but eight groups contain the possibility of improvement. Sixty per cent. of the admissions are men and women in whom there is a possibility of a recovery, but in 95 per cent. of the admissions there is a possibility of an improvement. We see, therefore, that there are certain forms of insanity in which there is not only a possibility, but a strong probability of a recovery; not that all of the group will recover, but many will; this holds equally true in the groups in which we find possibilities of improvement.

Under present conditions and methods, the recoveries, in the recoverable groups, are from 30 to 35 per cent., while the recoveries based on admissions are only 19 to 21 per cent. The claim of 35 to 50 per cent. of recoveries based on admissions as stated in some hospital reports is a pure fairy tale.

In order to represent this in a still more practical manner let us consider the conditions, possibilities and probabilities of the two thousand men and women that are admitted annually into our state hospitals. Of the 2,000 admitted, 600

belong to the manic-depressive group, with 180 recoveries and 150 are improved; the toxic group contains 280, with 140 recoveries and 28 improved; the infectious-exhaustive group contains 120, with 42 recoveries and 18 improved; the psychoneurosis group contains 10, with 2 recoveries and 2 improved; the dementia praecox group contains 420, with no recoveries, but 84 improved; the involuntary melancholia group contains 180, with 22 recoveries and 45 improved; the epileptic group contains 90, with no recoveries, but 5 improved; the paranoia group contains 10, with no recoveries and no improvement; the paresis group contains 80, with no recoveries and no improvement; the senile group contains 200, with no recoveries, but 24 improved; the amentia group contains 10, with no recoveries and no improvement.

Of the 2,000 admissions, 386 recover, 356 are improved and 1,258 are hopeless; but of the 1,190 admitted, in which there is a possibility of recovery and improvement, 386 have recovered and 243 were improved. These figures appear appalling to the citizen and he may well ask, what is medical science doing in this important matter? This question I will answer by saying: Give medical science an opportunity and take politics out of the institutions. Since the organization of the state hospitals in Missouri, medical science has hardly had a chance to cross the threshold of our state hospitals.

The state has been running fair boarding-houses at \$2.50 and \$3.00 per week from its boarders; of the 2,000 admitted annually, possibly 800 are hopeless, and for these intelligent and humane custodial care has been provided; but what can be done with the 1,200 men and women who contain the possibilities of recovery or improvement? Over these, scientific medical attention must have unhampered sway. Under scientific medical care and treatment the recoveries and the improved should be increased 100 per cent. Recoveries and improvement implies self-support and not a burden to the state.

But these groups must be recognized, segregated and treated accordingly. It is purely a question of diagnosis; but who shall make the diagnosis? The competent or the incompetent? Shall it be done by "the all-round doctor," or the doctor who has loafed in a state hospital, or the specialist in nervous and mental diseases? Under present methods these groups are put into a common dump and, if the Lord is willing, some may recover; diagnosis is the least thing considered. Who is responsible? To illustrate: Suppose the General Assembly of Missouri should appropriate one and one-half million dollars and erect with it a hospital for the poor, who may be suffering from some surgical disease, or pneumonia, typhoid fever, tuberculosis, cancer, etc., and then physicians were appointed to manage and treat these poor people, and these physicians so appointed had possibly never seen or never had

treated any of these diseases; physicians who could not diagnose a case of lung fever from typhoid fever, or who had never treated or operated on a case of appendicitis. What would the people and the humanitarians think? Who would be responsible for such outrageous methods?

But suppose, after these physicians had qualified themselves by two or four years of conscientious work and study, the political aspect of the state should change, or a new corps of officers be elected, and then these physicians be displaced for other beginners and novices. What would the people think? Would they submit to such methods in reference to the treatment of the poor who are suffering with bodily ailments? Yet such are the methods and such the system in our state hospitals for the treatment of poor men and women who are suffering from mental ills.

It may be asked, why are not specialists placed at the head of our state hospitals? The answer is, they cannot afford to do it. I do not know of a specialist in nervous and mental diseases in Missouri who would accept the superintendency of a state hospital under our present law and system. Some have tried it, but one dose has been sufficient. The reasons may be classed as follows:

1. The superintendent is not supreme. The board elects for him his assistant physicians, his steward and matron. These are the creatures of the board and not of the superintendent. He cannot discharge for failure of duty nor for incompetency; whether good or bad, competent or incompetent, lazy or active, loyal or treacherous, studious or blissfully ignorant; the superintendent is helpless.

2. The salary is insufficient and his service and position are at the caprice of the politician, and his tenure of service uncertain.

3. He is not supplied with the necessary equipments and intelligent and skilful assistants. Scientific medicine cannot be utilized without a competent pathologist.

If scientific medicine ever enters our state hospitals, it must come through the pathological route and by skilful assistants.

Rialto Building.

NOTES ON TUBERCULAR LARYNGITIS

DON A. VANDERHOOF, M.D.
COLORADO SPRINGS, COLO.

Only a very few years ago tubercular laryngeal and pharyngeal cases were looked on as always having a fatal termination. Now, under our present methods of treatment, we not only see those of a less extensive nature improve and get well, but even those which are quite extensive, both in regard to the ulceration of the larynx and to the condition of the lungs, also show

improvement, and many entirely clear up, even though the lung conditions do not improve at all. In the latter class of patients, even though they die later of tuberculosis, we find the larynx greatly improved, or even healed in many cases.

It is evident, therefore, that you can no longer look on these cases as incurable. Go into the treatment as thoroughly as you would if you expected every case to get well. Put your whole soul into the work, and you will be surprised by the good results obtained.

Of course, it need not be emphasized that while strenuously using the local treatment, one must look after the condition of the lungs as well. In other words, the condition of the whole body must be inquired into and carefully watched.

In this country, where we have so much faith in the altitude, it is only natural that we should place much credit in this direction for the results we derive, especially when we see patients who have done so nicely return to their homes in the East, and later return to this altitude with their trouble much advanced. Undoubtedly, much of this is due to the lack of care they exercise after their return home, free from the restraint under which they were here. For very soon many of them forget that they were ever "chasing the cure," and they lapse again into their old habits, trying to make themselves believe that they are now as well as they were before the dreaded tubercle bacillus found a working place in their body.

The class of cases I will speak of here are those in which the throat conditions improved regardless of the condition of the lungs.

CASE 1.—Mrs. S., aged 37. Came to Colorado Springs in the summer of 1912. Had been ill for about two years, with a bad involvement, at the present time, of both lungs. During the summer she spent as much time as possible out of doors, riding horseback every afternoon. This she did under the advice of an Eastern physician who sent her here, and during all this time she had an afternoon temperature of 102 F. or over.

Temperature when I saw her in October, 1912, ran from subnormal in the morning to 103 F. in the afternoon, and sometimes higher.

Subjective symptoms of throat. She says that her throat is very sore and that it is almost impossible for her to swallow. This has been going on continuously for three weeks or more, although it had been noticeable since July.

Objective symptoms of throat. The pharynx and epiglottis, as well as the interarytenoid space, are covered with superficial ulcerations. To the left side of the epiglottis is a small polypoid growth.

Treatment.—Orthoform tablets were given at once, one to be held in the mouth and dissolved twenty minutes before meals, and another ten minutes before meals. This helped some by way of a palliative treatment, but not as much as I wished, so after a couple of days I had her use orthoform powder with a DeVilbiss powder blower. This gave her enough relief so that she could eat again with a fair amount of comfort. If this had not given her a fair amount of relief I should have then used equal parts of orthoform and anesthetic, and if this would not have

given the desired results, a blocking of the internal branch of the superior laryngeal nerve would have been done. At the time I was working on this case a blocking of this nerve would have been one of the forms of treatment that I should not have resorted to till everything else had failed. Now I believe in using it at once, if the patient has been in pain for any length of time.

Every second day a 5 per cent. solution of cocain was applied over the diseased parts, and this was followed in a few minutes by a thorough application of a 5 per cent. formalin solution. It will be found in many cases, as I found in this one, that a 5 per cent. formalin application is too strong for the earlier treatment, and a 2½ per cent. solution should be used to begin with. Five minutes after this application I always use an application of 20 per cent. argyrol, thoroughly rubbed in.

For a home treatment the patient used a spray of 3 to 4 gts. of formalin to the atomizer. This was used three times a day and followed by a thorough application of 1 per cent. methylene-blue to the throat. The methylene-blue was only used twice a day, and on the days on which formalin applications were not made.

The ulcerative condition of the pharynx and epiglottis entirely disappeared, and the patient was able to eat with a fair amount of comfort until death, which occurred in February, 1913.

About a month before the end there appeared an ulcerated condition of both vocal cords. This remained the same until she passed away.

CASE 2. Mr. B., aged 24. Says his trouble dates from October, 1911. Started with a cough. Says that his physician in the East told him when he left that his left lung was slightly affected.

On examination here, both lungs were found to be involved; cough is very slight; expectoration scant and yellow. No pains in chest. Fever for past few weeks.

Throat began to get sore in the summer of 1911, although it had been feeling a little irritable at intervals before this. When I saw him in October there was some infiltration of arytenoid cartilages, ulceration on both tonsils, and especially deeply ulcerated on the left side in supratonsillar fossa. Posterior pillars are very rough and eaten deep in places.

Treatment.—I first used a cleansing treatment of the throat, following this with a thorough application of 5 per cent. formalin in glycerin solution, after thoroughly cocainizing the parts. On account of the pain following the treatments I at once dusted the parts with orthoform powder.

Three weeks after starting the treatments there was very little pain following the applications, and patient said he now ate without any discomfort at all. In three months his throat appeared entirely well, with the exception that his voice had not gained its normal tone. During these months his general condition had been looked after, and had shown wonderful improvement.

CASE 3.—Mr. L., aged 26. Ill in the East for two years. Both lungs affected. Says that he has not been able to talk above a whisper for a number of months. For about eight weeks there has been some soreness of throat; this has been a great deal worse during the last ten days, although at intervals it would appear better. Swallowing of solid foods more painful at one time than at another.

Subjective Symptoms.—Both arytenoid cartilages very much thickened and inflamed. Pharynx very dry and parched. On account of the swelling of the arytenoids it was impossible to get a good view of the parts below, as all parts were bound together;

but enough could be seen to say that there was ulceration below, but just how extensive it was impossible to say.

Treatment.—Thorough cleansing of the larynx was done every day, and every other day a 5 per cent. formalin solution was thoroughly rubbed into the parts after they were thoroughly cocainized. A Lugol's solution, 4 gr. to the oz., was applied to the pharynx every other day. Every second day a laryngeal was given from a stock solution consisting of menthol, gr. 20, guaiacol, gr. 80, oil cinnamon, gr. 3, benzoinol, oz. 4. This is the amount and strength that we keep in the office all the time, and from this we use ¼ to ½ strength (diluting with benzoinol), as we find indicated in each case.

After seven months' treatment the larynx was entirely healed, as far as could be seen, but there was considerable stenosis on account of the cicatricial tissue. The swelling of the arytenoid cartilages had decreased about one-half and are now in that condition. The voice is no better and, of course, never will be.

Patient is now feeling fine and able to work every day.

The use of the voice in all cases is prohibited to as great an extent as possible. With many cases it is very hard to make them understand that it is for their own good that they must refrain from using their voice. But absolute rest must be given to the diseased parts as much as possible.

The cases here reported have shown good results, to a certain extent, in regard to the throat. It not only shows this, but it also shows that tubercular laryngeal cases should no longer be left to their fate as they were some years ago. But at the present time, if the cases are diligently treated, you will find your results well worth the effort. Those that you cannot cure you may help, and if you are in a position to see many cases, you well know what it means to give these poor mortals relief. Where for days they have eaten as little as they could, they oftentimes wishing each meal would be their last. So even if you know that their days are numbered, at least relieve that terrible, distressing sore throat, which you can do in most cases by injecting the internal branch of the superior laryngeal nerve; this will give them a chance to eat, also to rest more comfortably until they pass on to that great unknown.

NITROGEN POISONING

J. J. GAINES, M.D.

EXCELSIOR SPRINGS, MO.

This is an era of scientific progress. In the great struggle to make medicine an exact science we have almost lost sight of important generalities. We have a well-marked condition of bacteritis and it has precipitated an epidemic of serophobia among the patients. We have become too exact to be serviceable in many of our

*Read by title, 55th annual meeting Missouri State Medical Association, Sedalia, May, 1913.

efforts. This paper is intended to be a general one. I would not go into chemical exactitude if I could.

I would first call your attention to the opposing characters of oxygen and nitrogen in their effects on the human economy. I make the general statement at the outset, that "auto-intoxication," "uremic poisoning," "rheumatism," and some of the anemias are in reality only conditions existing by reason of imperfect elimination of nitrogen. Urea and uric acid are nitrogen compounds wherein nitrogen is the element that does the mischief. Enough nitrogen will kill as quickly as cyanid of potassium. Smaller quantities kill more slowly in proportion to their strength. Sedentary habits, excesses of proteid food and diminished ingestion of oxygen lead to the various forms of nitrogen poisoning.

Why do we unconsciously tell the patient to take more exercise out of doors? Why do we tell him to drink more water? Why do we tell him he needs more air? Because we wish to burn up his excess of nitrogen with oxygen. So long as the elimination of nitrogen is sufficiently active the patient cannot have rheumatism. No man has ever yet, so far as I know, shown the relation of uric acid to rheumatism. Uric acid has become so common a commodity that you can tell the patient he is suffering with uric acid and he will be satisfied, even if you are absolutely ignorant of what is the matter with him.

In our vainglorious war on uric acid we are prone to give some alkali to neutralize it. Is this the correct deduction? Is uric acid an acid at all? I wish somebody would tell me. I do know that it is a synthetical substance, laden with nitrogen, and that oxygen will disperse it, but I fail to see the correctness of the therapy which gives an alkaline to neutralize it. Yet this is the reasoning of more than half the general practitioners of medicine.

Urea for another example. A nitrogen compound not very dissimilar to uric acid, nearly 3 per cent. of it in normal urine. But the urea must escape, and if, by reason of diseased kidneys, its quota cannot escape, we have the phenomena of nitrogen poisoning. It is not the volume of urea (nor the deficiency of it) that diseases the kidney; it is the failure of the kidneys to carry off the nitrogen that makes it accumulate in toxic quantity in the patient and will kill him if sufficient quantity is retained.

How does nitrogen in excess get into a man? He eats it in rare beefsteak and other fresh lean meats; he gets it in sugars, and he seals it up in his skin with coffee and tobacco. Nitrogen loves to gambol with lager beer. The various sweetmeats sold in such attractive and toothsome form carry the sleepy nitrogen into our lady bounti-

ful whom we diagnose as a "sufferer from uric acid." The pot-bellied captain of industry who sits at a desk ten hours a day, breathes in a few cubic feet of tobacco-laden "air," eats three immense half-raw steaks (doped with sauce to kill the taste) and a chunk of mince pie, just has to have a half-dozen beers during the evening to make him feel like anything. He gets uric acid. But doesn't it look more logical that he is just full of nitrogen and lacks oxygen? Fill him full of pure water, a gallon or more a day. Water is one-third oxygen, and there's lots of oxygen in Missouri atmosphere. Shut off his steaks and send him to the hay field. He can be cured without medicine better than with it.

I do not doubt that half our chronic diseases are due to long-continued accumulations of nitrogen in the system.

Nitrogen and oxygen are distributed in nature in perfect proportion for animal use. It is man's depraved habits that make possible poisonous quantities of nitrogen. Excess of oxygen in the human economy is rare; excess of nitrogen common. Man is the only animal that successfully poisons himself with nitrogen. "Suboxidization" is a better term than auto-intoxication or uremia. Uric-acid poisoning is only suboxidization of nitrogen compounds in the body.

Common symptoms of nitrogen poisoning: Lethargy, weariness, headaches, stupor, sleepiness, sallow color, aching of joints, constipation, scanty, high-colored urine, shortness of breath, all these may continue to profound coma or inflammation of the serous or muscular structures.

The remedy: Treat the patient as a whole: increase elimination by stimulation of bowels, kidneys and skin; cut off lean meats and sugars, coffee, tea and alcohol as well. Limit or abandon tobacco. Give heavy potions of water, hot or cold. If meats must be indulged in, give air-cured meats well cooked. In these the airing and smoking processes as well as salting, greatly reduce the amount of nitrogen contained. Enforce open-air exercise to get more oxygen. Give such remedies as will increase oxidization and do not aim to "neutralize acids." The mineral kingdom furnishes us with the chief oxidizers. The organic remedies are of little avail. Lime, soda and salts are common things, that judiciously used, cover nine-tenths of a safe and sane therapy.

Ozone machines or outfits that you have to smell for a few minutes daily, only appeal to me for patients that are not well enough to get outdoors, and these cannot get to the machine. Pure outdoor air is cheaper and infinitely better. Sunshine increases oxidization too. We haven't any sunshine machines, but plenty of "moonshine" apparatus that "cuts goin' an' comin'." They skin both doctor and patient.

This paper is necessarily and humanely short.

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AUGUST, 1913

EDITORIALS

ETIOLOGY OF POLIOMYELITIS; SAUNDERS' THEORY APPARENTLY CONFIRMED

In the June number of *THE JOURNAL* there appeared an article by Dr. E. W. Saunders, read before the Missouri State Medical Association at its annual session in St. Louis, May 13, 1913, under the title, "The Prophylaxis of Poliomyelitis," in which a new theory of the genesis of poliomyelitis was announced, namely, that the disease originates from fowls, and the potential virus is transmitted by flies feeding on the *matrices morbi* (a limberneck chicken) to their larvae, in which it reaches its perfect development; so that the larval fly contains not only the *contagium vivum*, but a large proportion of toxalbumose, producing a toxi-infection in the organism into which the larvae are introduced. This theory would seem to account for all the facts known concerning the incidence of sporadic or of epidemic poliomyelitis, and also explains the great mortality amongst poultry and swine preceding and accompanying the epidemics in man. Recently, Wisdom of DeQueen, Ark., succeeded in infecting healthy fowls from limberneck fowls; and Saunders and White, working in the laboratory of the Bethesda Hospital, St. Louis, succeeded in producing respiratory paralysis and death within twenty-four hours by injecting into guinea-pigs several minims of a glycerin extract of virulent larvae taken from the craw of a limberneck fowl; in some of the guinea-pigs the extract was administered *per os*. They also produced respiratory paralysis and death in monkeys by the same process.

At a special meeting of the St. Louis Medical Society, July 26, Dr. Saunders exhibited several guinea-pigs, a chicken and a monkey, all having been infected experimentally with the virulent larvae and all in various stages of paralysis. During the demonstration the monkey died from respiratory paralysis and exhibited other typical symptoms of poliomyelitis as seen in children.

These experiments seem to prove the validity of the theory, and we may hope that the last of that ubiquitous, ghastly trio, tetanus, rabies and poliomyelitis, has been brought under rational control. Whilst the disease in poultry, hogs and

dogs cannot be at once eradicated, neither can all the flies on the continent be destroyed in a season, it is not necessary that the child of any intelligent person should be infected so long as stringent regulations of personal hygiene are followed. In other words, let no one swallow the embryonic fly. And this rule can be absolutely followed, at least to the extent of eliminating the uncooked larvae from the diet.

These statements apply only to the disease as we know it in this part of the world, and not to that form of it which persists during the winter months. Vulpus and Bruns believe in the old theory of polygenesis.

The investigation is being continued with the hope that the particular species of fly which transmits the disease may be discovered and the mysteries surrounding this dreaded disease dispelled.

NEW COUNTY SOCIETIES ORGANIZED

Three new county medical societies were organized early in this month and have applied for affiliation with the State Association. The counties are: Wright, Douglas and Hickory. In the next issue of *THE JOURNAL* we will give a full account of the meetings of these new societies and a list of their officers and members.

WORKHOUSE PHYSICIAN

The mayor of St. Louis is to be commended for his demand that a resident physician be placed at the Workhouse, but whether the Municipal Assembly will exhibit a spirit of enlightenment equal to Mayor Kiel's humaneness remains to be seen; the physician has not yet been appointed.

The Workhouse at St. Louis has never been referred to as a model of cleanliness, nor as an abode fit for man, even a criminal. On the contrary, the sanitary conditions and morale of the institution were of such a disgraceful nature, as exposed by one of the St. Louis newspapers, that an investigating committee made a tour of the place. The conditions, however, as far as we are aware, have changed not at all or very little for the better.

That civic health and civic economy are synonymous terms may some day dawn glowingly on the minds of city administrations, and in hope of such a happy consummation the medical profession will continue its labor of health education and disease prevention. Nor are signs wanting that prompt the hope of early recognition of the economic value to the city of conserving the health of its criminal charges, for we read many articles in the daily press urging reforms in this direction. The *St. Louis Republic*,

recently commenting on the mayor's demand for a resident Workhouse physician, says: "A career in crime invariably exposes the criminal to the acquirement of disease. The result is that the average health of persons in prison is far below that of persons outside of prison. One of the conditions, therefore, necessary to the reform of many criminals is the improvement of their health."

Doubtless the delay in providing a resident physician at the Workhouse is only temporary and unavoidable because there are several physicians of the Municipal Assembly whose advice and influence will surely lean heavily to the side of the mayor in this matter.

NEW AND NON-OFFICIAL REMEDIES *

The work of the American Medical Association increases from year to year and grows in importance and usefulness to the practicing physician in every phase of his professional life. Not the least of the numerous activities of the Association is the work of the Council on Pharmacy and Chemistry through which the efficacy and honesty of articles supposed to alleviate disease are proved—or exposed. One of the publications of the Council is *New and Non-Official Remedies*, containing full descriptions of the investigations made and the results obtained. The 1913 edition of this book has recently been issued and contains much information of great value to the physician. It is the only source at our command whereby we may verify the statements of drug makers concerning the new products offered to the profession. Every member should possess a copy of the book.

AMBULANCE SURGEONS

The St. Louis Health Department has reestablished the system of sending surgeons in city ambulances answering emergency calls. It is said the junior interns at the City Hospital will be assigned to ambulance duty, working in three shifts of eight hours each; each intern will be required to serve twenty days on ambulance calls.

This is certainly in accord with present-day methods of conserving health and life; prompt medical aid intelligently administered will undoubtedly prevent much suffering and greatly enhance the chances of saving lives placed in jeopardy through sudden and unexpected calamity or by suicidal attempt. The system was operated for a short time about two years ago, but for some reason not stated, was discontinued.

* *New and Non-Official Remedies*. Postpaid 25c. American Medical Association, 535 North Dearborn Street, Chicago.

OBITUARY

J. M. FINNEY, M.D.

Dr. J. M. Finney of Cape Girardeau, for many years a practitioner in that section, died at his home very suddenly from apoplexy, June 1.

ANDREW L. FULTON, M.D.

Dr. Andrew L. Fulton of Kansas City, a graduate of Bellevue Hospital Medical College, 1870, died at his home July 15, aged 70 years. He was a pioneer physician of Missouri and long a member of the Jackson County Medical Society and the Missouri State Medical Association. He leaves a widow and one son.

WILLIAM H. EVANS, M.D.

Dr. William H. Evans of Sedalia, one of the best-known physicians of Central Missouri, died in a hospital at Kansas City, July 20, of heart disease, aged 73. He was a member of the Pettis County Medical Society, the Missouri State Medical and the American Medical Associations. He was a graduate of the Bellevue Hospital Medical College, 1867.

JOHN PITMAN, M.D.

Dr. John Pitman of Kirkwood, a graduate of St. Louis Medical College, 1864, and a member of the St. Louis County Medical Society, the Missouri State Medical and the American Medical Associations, died at St. Luke's Hospital, St. Louis, May 29, 1913, following an operation for appendicitis. Dr. Pitman was one of the oldest practitioners in St. Louis County and held many positions of honor and trust, both in the medical organization and in civic life.

WALLACE B. DEFFENBAUGH, M.D.

Dr. W. B. Deffenbaugh of St. Joseph, a graduate of Sterling Medical College, Ohio, 1885, died suddenly from apoplexy while standing at his office desk, July 2. He was 53 years old. He was a member of the St. Joseph-Buchanan-Andrew County Medical Society, the Missouri State and the American Medical Associations and other medical bodies, an earnest worker in Y. M. C. A. circles, being often called on for health lectures, and served two terms as city physician of St. Joseph.

JOHN N. WASHINGTON, PH.G., M.D.

Dr. John N. Washington was born at Newbourne, N. C., Dec. 14, 1849, and died at Van Buren, Mo., Jan. 21, 1913. He received his education in private schools in North Carolina, and the public schools in St. Louis, Mo. He entered

the retail drug business in the later sixties in St. Louis and matriculated in the St. Louis College of Pharmacy, where he graduated with honors in 1876.

Having laid a substantial foundation for the study of medicine he immediately matriculated in the Missouri Medical College, now Washington University Medical School. From this institution he graduated in 1879 with merits and honor, and through competitive examinations was appointed intern and later assistant superintendent of the St. Louis City Hospital; in this capacity he served with signal ability and success in 1879-1880.

He became a member of the Medical Society of the St. Louis City Hospital Alumni, St. Louis Medical Society, Missouri State Medical Association and American Medical Association. Dr. Washington became an active and ardent votary of the healing art, settling down in the city of his adoption, St. Louis, where he soon distinguished himself, acquiring a large and lucrative practice, numbering among his patients many of the most prominent and influential citizens. It may be said of Dr. Washington that he was a born scientist; he continually thirsted for more knowledge, devoting all his spare time to medical and surgical research both in the chemical and pathological laboratories.

In 1890 he gave up his large practice in St. Louis to engage in the work of his choice—scientific research, as senior assistant surgeon in the Chicago Polyclinic, and senior assistant to Surgeon-in-Chief of the Augustana Hospital in the city of Chicago, Professor Albert J. Ochsner.

Dr. Washington continued in this field of labor several years, being associated with many of the most advanced and distinguished professional men; he devoted much of his time to the care and treatment of the poor and unfortunate people of that city.

His ardent and continuous labors at last began to draw too heavily on his vitality, for besides his regular duties he took an active part in the proceedings of the North Chicago Medical Society, of which he was secretary and treasurer, the Chicago Medical Society and the American Medical Association.

In 1900 Dr. Washington resigned and retired from his labors in Chicago and sought recreation and health in the Ozarks in Missouri, in the beautiful Bellevue Valley near the little city of Ironton.

After a few months recuperation, at the solicitation of friends, he moved to Reynolds County, locating in the thriving little town of Ellington. Having in a large measure regained his health, he began responding to professional calls and soon built up a good practice.

In 1903 he yielded to the continuous and urgent appeals of his friends and patients to become a citizen of Carter County, and located

in the picturesque little town of Van Buren, the county seat, situated on that matchless mountain stream, Current River. Here Dr. Washington performed some of the most notable services in medicine and surgery known to this section of the state.

During his residence in Southern Missouri the doctor affiliated himself with the Carter-Shannon County Medical Society, the Southwest Missouri District Medical Society and the Missouri State Medical Association. He attended their meetings and contributed noteworthy papers and essays to each of them.

In 1882 he was united in marriage to Miss Georgine Seirmer of St. Louis; to this union was born one son and two daughters. After a few years the mother died; the children are residents of St. Louis and are members of prominent circles in that city.

In Van Buren, Dr. Washington, through his attainments, conscientious devotion to professional duties, firm and fearless endeavor to uphold the principles of good citizenship, strong advocacy of professional ethics, endeared his personalities to the hearts of the good citizens of Carter and surrounding counties. His tastes were simple and refined; his habits were domestic and cordial. He maintained a home, artistic yet plain, surrounded with a wealth of rare flowers and plants, which, with a genial Southern hospitality, pleased and delighted his friends and admirers.

This, perhaps, led to a romance of such rarity among medical men that, although a little beyond the meridian of life, he was awakened to the consciousness that among his friends and admirers there was one who watched, nursed and administered to his patients, among her relatives, in such a tender, loving and skilful manner that greatly enhanced their convalescence; one whose mind and heart understood his motives and endeavors to such a phenomenal degree that a strong bond of sympathy, admiration and friendship cemented their lives together in the sacred cause of humanity. Cupid decreed, in 1907 Miss Georgia Snider, daughter of a prominent and pioneer family of Fremont, Carter County, became the bride of Dr. Washington, graced his artistic little home, and entered into full partnership with him in his professional cares and duties.

Through her tender and sterling ministrations the doctor united with the church of her choice, Methodist Episcopal, South; and until the final summons of the Great Physician above, they labored hand in hand, heart in heart, together in unity, in ministrations of the profession—the noblest that man and woman can engage.

Dr. Washington was a valued member of the Independent Order of Odd Fellows; his brethren of the Order assisted the pastor and members of his church in conducting the last sad rites of the

funeral ceremonies and his interment in the Van Buren City Cemetery.

The casket was profusely laden by friends, brethren and relatives with wreaths and emblems of choicest flowers, the flowers he loved so well.

The funeral was one of the largest known in this section; the county officers, the professional men and merchants closed their offices and places of business as a token of sorrow and respect to his prominence, his life work and his esteemed widow.

A CLASSMATE.

NEWS NOTES

THE following articles have been accepted for inclusion in New and Non-Official Remedies:

Luminal (Merck & Co.).

Sodium Luminal (Merck & Co.).

Magnesium Perhydrol (Merck & Co.).

Magnesium Perhydrol, 25 per cent. (Merck & Co.).

Magnesium Perhydrol, 25 per cent., Tablets (Merck & Co.).

Cholera Agglutinating Serum (H. K. Mulford Co.).

Diphtheria Bacterin (H. K. Mulford Co.).

Staphylococcic Cultures (H. K. Mulford Co.).

Luminal (Farbenfabriken of Elberfeld Co.).

Luminal Tablets, 1½ gr. (Farbenfabriken of Elberfeld Co.).

Luminal Tablets, 5 gr. (Farbenfabriken of Elberfeld Co.).

Luminal Sodium (Farbenfabriken of Elberfeld Co.).

Solution of Amylene-Chloral, 50 per cent. Kalle (Kalle & Co.).

Luminal Tablets, 1½ gr., Merck (Merck & Co.).

Luminal Tablets, 5 gr., Merck (Merck & Co.).

Emetine Hydrochloride, Merck (Merck & Co.).

Ampuls Emetine Hydrochloride, Mulford (H. K. Mulford Co.).

Agglutinating Serum for the Identification of Bacillus Typhosus (H. K. Mulford Co.).

Agglutinating Serum for the Identification of Bacillus Typhosus, A (H. K. Mulford Co.).

Agglutinating Serum for the Identification of Bacillus Typhosus, B (H. K. Mulford Co.).

Aene Vaccine (Greeley Laboratories).

Colon Vaccine (Greeley Laboratories).

Gonococcus Vaccine (Greeley Laboratories).

Meningococcus Vaccine (Greeley Laboratories).

Pneumococcus Vaccine (Greeley Laboratories).

Pyocyaneus Vaccine (Greeley Laboratories).

Staphylococcus Albus Vaccine (Greeley Laboratories).

Staphylococcus Aureus Vaccine (Greeley Laboratories).

Streptococcus Vaccine (Greeley Laboratories).

Tuberculin, B. E. (Greeley Laboratories).

Typhoid Bacillus Vaccine (Greeley Laboratories).

For reasons explained in the report of the Council (*Jour. A. M. A.*, June 21, 1913, p. 1974) the Council has voted to reconsider the acceptance of and to omit the following from New and Non-Official Remedies:

Thiocol, Roche (Hoffmann-LaRoche Chemical Works).

Syrup Thiocol, Roche (Hoffmann-LaRoche Chemical Works).

At the request of the manufacturer, the Council has voted to reconsider the acceptance of and to omit the following from New and Non-Official Remedies:

Diphtherie Antitoxin, U. S. P., Stearns (F. Stearns & Co.).

CORRESPONDENCE

LETTER FROM EUROPE

THE CROSSING, SEA-SICKNESS AND SHIP'S SURGEONS

Once on a time there may have been such a disease as sea-sickness, just as once on a time there was such a disease as yellow fever in Havana and black death in London.

I am speaking now of the modern leviathan. Of course if you want to talk about old-fashioned, slow, small boats you can dig up the ancient malady just as you can yellow fever in some tropical jungle or bubonic plague in the far East.

But the great wet way as it is traversed to-day, really offers nothing to jar one out of his ordinary daily routine, for the modern transatlantic liner differs not at all from a big hotel or office building. If you want the sensation of going abroad just step into the nearest office building, ride up and down several times in the express elevator, step off on the tarred roof, which gives you the smell, and pull your hat down over your eyes to avoid the breeze and smoke, and there you are. If you are an old timer and insist on realism don't forget to call the elevator boy "steward" and the janitor "captain" as you go out.

As a matter of fact, a business man I met on my last crossing said he really didn't know when he was on board ship from when he was in his office. His business took him frequently to London. When it was necessary for him to go he merely mentioned the fact to his stenographer. His desk, his stenographer's desk and machine, the lady herself, and the office boy were placed on the boat at 9 a. m. and he simply took a taxi to the boat instead of to his office, pulled off his coat, dictated his letters, sent his tele-

grams, consulted his stock ticker, and in fact altered his day's routine not the slightest. If it wasn't for the fact that the salt air altered the flavor of his cigars so that he began to notice it about the third day out, he said he would never know he had left little old New York.

But most people cross the Atlantic, presumably, for pleasure and not for business. Now let us see what one can do to kill time on the modern boat. In the old days you had two choices, eating yourself to death in the salon or drinking yourself to death in the smoking-room. If you could by any chance find nine other sports on board you might risk two bits on a hat pool of the day's run. But to-day how different. To start in with, you are ushered into a magnificent suite (I presume we are traveling in style, of course) consisting of reception room, dining-room, bedroom and bath. Altogether more commodious perhaps than the apartment you left at home. There is probably a Corot and a few Whistler etchings on the walls. A French maid or a perfectly trained English valet (according to your sex) is at your service. After you have dressed, you take the elevator to the main office and are directed to the postoffice, where your mail is awaiting you. Then you visit the telegraph office and send the necessary wireless messages.

You have several choices for spending the morning; there is the music room with a symphony orchestra, the gymnasium, the conservatory, bridge for the ladies and poker for the men with no limit but the sky.

If you don't want to bother with the table d'hôte for lunch you can eat à la carte on the roof garden or in the rathskeller. The latter is better, however, in the evening because they run a very fine cabaret after 11 p. m.

The first day out it is well to spend the afternoon inspecting the ship. This can be done by calling up the garage from your room and ordering a taxi; by means of this and alpine guides stationed at various points suitable for ascent and descent, you can get a little idea of the size of your boat.

Don't forget to stop at the farm garden, for it's quite the thing to pick your own asparagus and have it sent down for your dinner. You can also stop at the flower garden and order the particular roses cut from the growing bushes, or the gentle violets picked from their mossy beds, for your table decorations.

Now, of course, under such conditions as these, little things like sea-sickness and ship's doctors, which were to furnish the subject of this letter, are lost in the shuffle. Suppose, however, you say, one is taken ill, what is to be done? Why, send a wireless to your family physician or to the proper European specialist. In a few minutes back will come full directions including a prescription that you send down to the ship's

drug store and have compounded immediately. And of course there is a perfectly organized corps of trained nurses on board who can take care of everything from hysteria to the after-treatment of appendicostomy.

Speaking of the latter, these modern boats provide for the care of the acute appendix; that being recognized as a malady that can't wait. Coming back in the same boat I went over on. I noticed on both trips a modest appearing man who was always sitting in the smoking-room and seemed to have nothing to do. I asked the steward who he was and was told that he was the ship's appendix surgeon. Moreover, it was stated that he was very skilful and had acquired by constant practice on the steerage passengers, so clever a technique that he worked perfectly with the motion of the boat and that they no longer had to stop the ship for an operation.

What a difference from the old ship's doctors that we used to know. I have met many of them and they have helped me while away many pleasant hours in the good old times when it took us as long as six or seven days to cross the pond. These old-time doctors could be divided into two classes; the young fellow just out of medical school who took the place to see a bit of the world before settling down, and the old fellow who had a pull with the company and took an occasional trip as a sort of vacation. Now in both instances the job was taken purely for the doctor's own pleasure, and I have known them to be very much astonished and even angry if consulted by one of the passengers on a matter of health. Those of the first class above mentioned looked the boat over carefully and having selected the best looking girl on board were no longer to be seen, except for a few minutes at meal time, unless you, having selected the second best looking girl, happened on the pair in looking for an equally secluded spot.

The old doctor of the second class always had whiskers and always smoked a pipe and was always to be found where drinks were being bought. His great value consisted in being able to advise you on the proper cognac to order and the particularly fine old vintage in the ship's wine cellar.

I once asked one of the ship's doctors (it was on my first trip) how he treated sea-sickness. "Seidlitz powder," he replied abruptly.

"Is that your only treatment?"

"No, I sometimes use two," he said.

Speaking of one's first trip,—first of all one should never speak of "trip" but of "crossing." It sounds better to say tenth crossing than fifth trip. It is a curious fact, as far as I know, one doesn't hesitate to admit that it is one's first crossing, and even to make that an excuse for turning fellow-passengers into a set of Encyclopedia Britannia; but never in my whole experience with ocean travel have I heard anyone admit it was their second trip. It seems to be an

unwritten law that having been abroad once you are permitted to square, or cube or raise to the *n*th power, or do any mathematical juggling you choose, with that trip for the benefit of the passengers with whom you make subsequent trips. I have long ceased to say anything about myself after I get on shipboard until the other fellow gets through talking.

At the first luncheon the matter of crossings is at once dragged out. The chap who sits next you makes himself very much at home, is particular to address the man who waits on him as "steward" in a loud tone of voice, and to remark that things look natural once more.

Of course, some one immediately remarks that this isn't his first trip. That is the cue he expects and he says in a tone of voice that carries across four tables, that this is his ninth crossing. About then some chap at the next table will look around and with a sniff, remark that he is now crossing for the fifteenth time. When the neighboring ladies have ceased "Oh-oh-ing" there is always someone else who will raise the ante into the early twenties at least, and thus become the cynosure of all eyes. Meanwhile, you have kept a modest silence until the returns are all in, then by the proper sarcastic smile you can draw the right question from the little school teacher sitting wide-eyed beside you.

"I can see by your look that you have crossed before," she says demurely, angling for increased knowledge.

"Oh, yes," you respond carelessly, "let me see, I crossed first in the old *Pneumonic* when she broke all records for getting into Liverpool from New York inside of two weeks. That was in eighteen umpty seven and I have crossed every year since." (Make the date far enough back to beat the nearest competitor at least nine crossings.)

The little lady is busy counting on her fingers and finally announces excitedly to all the room, "Why that was seventeen years ago and that must make this your thirty-third crossing!"

You very modestly admit, with a sigh, that she mustn't speak of such things as it makes you feel very, very old. And then when you take your promenade on deck and see the fair ladies in the steamer chairs pointing you out to their friends, you know that they are saying, "He has crossed more times than any one else on board except the captain."

Speaking of steamer chairs, they furnish the greatest system for graft that was ever invented. Everybody, even the old timer, has to hire a steamer chair for the crossing. I always do myself. I always think I will want to use it and I always do exactly the same thing. I rush madly up to the deck steward as soon as I get on board and pay my dollar for the chair and in addition slip him a generous tip to insure its

being placed in a good location. Then I get out my steamer rug and a book, stretch myself out comfortably and remain in the chair until lunch time. After lunch I go into the smoking-room for my coffee and cigarette, after which I wish to walk on deck for a while. After the promenade I always feel like the smoking-room again—for some peculiar reason, and almost always you meet some interesting chap while sipping that peculiar reason, and when he finally says, "Let's have just one more before dinner," it's too late to go back to the chair. I will swear that I have never failed to hire a chair, but have never even seen it after the first day out.

I had started to speak of the high finance connected with the rental of steamer chairs. Its got every other form of tainted wealth skun a mile, from Standard Oil to Jew pawnbroker. You can figure it out for yourself. If the original cost of a steamer chair is one dollar and you can hire it out for a dollar a crossing and less than a week is consumed in crossing, what is the per cent. per year on the original investment, taking also into consideration the fact that a steamer chair is immortal: one has at least never seen such a thing as a new steamer chair except on a maiden trip.

Another thing I have against steamer chairs is the fact that in the old days when there was such a malady as sea-sickness, the flock of well-meaning but ignorant idiots who didn't get sick, always advised the poor, suffering invalid to get up on deck and sit in a chair. If there is any time in the world that a person should be kept in a horizontal position, flat in bed, it is when he is sea-sick. I would as soon think of advising anyone with a gangrenous appendix or a typhoid perforation or a pulmonary hemorrhage to get up and get some air,—to get up and walk, to come out of the berth and sit in a chair, as I would a person afflicted with sea-sickness. Woods Hutchinson is one of the few men who have written intelligently on sea-sickness. As he has truly said, there is no remedy. One can get anesthetized or drunk, as he prefers, before going on board, and if a fast enough boat is selected, keep under that influence until he reaches the other side. But outside of that there is no remedy save lying flat in bed and keeping as near the latter condition as your prohibition conscience will permit.

I should say "was" instead of "is" for, as I mentioned in the beginning, sea-sickness under modern sailing conditions is getting to be as rare a malady as tuberculosis will be after the adoption of the Friedmann serum—if we are to believe the modern newspapers—and provided the good doctor's craft doesn't turn turtle.

R. L. T.

MISCELLANY

AN ACT

To promote the public health by protecting certain employees in this state from the dangers of occupational or industrial diseases, providing penalties, and providing for the enforcement thereof.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. That every employer of labor in this state, engaged in carrying on any work, trade or process which may produce any illness or disease peculiar to the work or process carried on, or which subjects the employee to the danger of illness or disease incident to such work, trade or process, to which employees are exposed, shall, for the protection of all employees engaged in such work, trade or process, adopt and provide approved and effective devices, means or methods for the prevention of such industrial or occupational diseases as are incident to such work, trade or process.

Sec. 2. The carrying on of any process, or manufacture, or labor in this state in which antimony, arsenic, brass, copper, lead, mercury, phosphorus, zinc, their alloys or salts or any poisonous chemicals, minerals, acids, fumes, vapors, gases, or other substances, are generated or used, employed or handled by the employees in harmful quantities, or under harmful conditions, or come in contact with in a harmful way, are hereby declared to be especially dangerous to the health of the employees.

Sec. 3. Every employer in this state to which this act applies shall provide for and place at the disposal of the employees so engaged, and shall maintain in good condition without cost to the employees, working clothes to be kept and used exclusively by such employees while at work and all employees therein shall be required at all times while they are at work to use and wear such clothing; and in all processes of manufacture or labor referred to in this section which are productive of noxious or poisonous dusts, adequate and approved respirators shall be furnished and maintained by the employers in good condition and without cost to the employees, and such employees shall use such respirators at all times while engaged in any work productive of noxious or poisonous dusts.

Sec. 4. Every employer engaged in carrying on any process or manufacture referred to in section 2 of this act, shall, as often as once every calendar month, cause all employees who come into direct contact with the poisonous agencies or injurious processes referred to in section 2 of this act, to be examined by a competent licensed and reputable physician for the purpose of ascertaining if there exists in any employee any

industrial or occupational disease or illness or any disease or illness due or incident to the character of the work in which the employee is engaged.

Sec. 5. It is hereby made the duty of any licensed physician who shall make a physical examination of any employee under the provisions of section 4 of this act, to make within twenty-four hours a triplicate report thereof to the state board of health of the state of Missouri on blanks to be furnished by said board on request, and if any such disease or illness is found, the physician shall so report, and if any such disease is found, the report shall state the name and address and business of such employer and the nature of the disease in precise and definite terms of all the diseases or illness with which the employee is afflicted and the probable extent and duration thereof, the name and business of employer, and the last place and length of employment: Provided, that the failure of any such physician to receive blanks from the state board of health for making such a report shall not excuse the physician from making the report as herein required. Any physician who shall fail to make a report as required by this section shall be deemed guilty of a misdemeanor and upon conviction shall be fined not less than fifty dollars (\$50.00), and in each case shall stand committed until such fine and costs are paid unless otherwise discharged by due process of law.

Sec. 6. The secretary of the state board of health shall, immediately upon receipt of any report from any physician in accordance with the provisions of section 5 of this act, transmit a copy thereof to the state factory inspector, and a copy to the superintendent of the factory in which the employee is supposed to have contracted his ailment.

Sec. 7. Every employer engaged in carrying on any process or manufacture or labor referred to in section 2 of this act, shall provide, separate and apart from the workshop in which such employees are engaged, a dressing room and lavatory for the use of such employees who are exposed to poisonous or injurious dusts, fumes and gases, and such lavatory shall be kept and maintained in a hygienic and sanitary manner and provided with a sufficient number of basins or spigots with adequate washing facilities including hot and cold water, clean individual towels and soap, and sufficient shower baths, and the dressing room shall be furnished with compartment lockers, so that the ordinary street clothes of such employees shall be kept separate and apart from their working clothes. Male and female employees shall be provided for separately.

Sec. 8. No employee shall take or be allowed to take any food or drink of any kind into any room or apartment in which any process or manufacture or labor referred to in section 2 of this

act is carried on, or in which poisonous substances or injurious or noxious fumes, dusts or gases, are present as the result of such work or process being carried on in such room or apartment, and the employees shall not remain in any such room or apartment during the time allowed for meals, and suitable provision shall be made and maintained by the employer for enabling the employees to take their meals elsewhere in such place of employment, and a sufficient number of sanitary drinking fountains containing wholesome drinking water, and providing ice for same, shall be provided and maintained for the use of the employees within reasonable access and without cost to them.

Sec. 9. All employers engaged in carrying on any process or manufacture or labor referred to in section 2 of this act, shall provide and maintain adequate devices for carrying off all poisonous or injurious fumes from any furnaces which may be employed in any such process or manufacture or labor, and shall also provide and maintain adequate and efficient facilities for carrying off all injurious dust, and the floors in any room or apartment where such work or process is carried on shall be kept and maintained in a smooth and hard condition, and no sweeping shall be permitted during working hours except where the floor in such work shop is dampened so as to prevent the raising of dust; and all ore, slag, dross and fume shall be kept in some room or apartment separate from the room occupied by the employees, and all mixing and weighing of such ore, slag, dross or fume shall be done in such separate room or apartment, and all such material shall be dampened or covered before being handled or transported by employees.

Sec. 10. When any flues or other apparatus are used in any such process or manufacture or labor referred to in section 2 of this act, and when such flues or other apparatus are being cleaned or emptied, the employer shall in every case provide and maintain a sufficient, adequate and efficient means or device, such as canvas bags or other approved device, or by dampening the dust, or some other efficient method for catching and collecting the dust and preventing it from unreasonably fouling or polluting the air in which the employees are obliged to work, and, wherever practicable, the dust occasioned in any process or manufacture referred to in section 2 of this act, and in any polishing or finishing therein, shall be dampened or wet down or covered, and every reasonable precaution shall be adopted by the employer to prevent the unnecessary creation or raising of dust, and all floors shall be washed or scrubbed at least once every working day; and such parts of the work or process as are especially dangerous to the employees, on account of poisonous fumes, dusts and gases, shall, where practicable, be carried on in separate rooms and under cover of some suitable

and efficient device to remove the danger to the health of such employees as far as may be reasonably consistent with the manufacturing process, and the fixtures and tools employed in any such process or manufacture or labor, shall be thoroughly washed and cleaned at reasonable intervals.

Sec. 11. All hoppers or chutes or similar devices used in the course of any process or manufacture referred to in section 2 of this act shall be provided with a hood or covering, and an adequate and efficient apparatus or other proper device for the purpose of drawing away from the employees, noxious, poisonous or injurious dusts, and preventing the employees from coming into unnecessary contact therewith; and all conveyances or receptacles used for the transportation about or the storage in any place where any such process or manufacture or labor referred to in section 2 of this act is carried on, shall be properly covered or dampened in such a way as to protect the health of the employees, and no refuse of a dangerous character incident to the work or process carried on in any such place shall be allowed to remain accumulated on the floors thereof.

Sec. 12. It shall be the duty of the state factory inspector to enforce the provisions of this act and to prosecute all violations of the same before any magistrate or any court of competent jurisdiction in this state, and for that purpose the state factory inspector and his assistants are empowered to and shall visit and inspect, at least once a year, and at reasonable hours, and as often as practicable, all places of employment covered by the provisions of this act.

Sec. 13. For the purpose of disseminating a general knowledge of the provisions of this act and of the dangers to the health of employees in any work or process covered by the provisions of this act, the employer shall post in a conspicuous place in every room or apartment in which any such work or process is carried on, appropriate notices of the known dangers to the health of any such employees arising from such work or process, and simple instructions as to any known means of avoiding, so far as possible, the injurious consequences thereof, and the state factory inspector shall have prepared a notice covering the salient features of this act, and furnish a reasonable number of copies thereof to employers in this state, affected by the provisions of this act, which notice shall be posted by every such employer in a conspicuous place in every room or apartment in such place of employment. The notices required by this section shall be printed on cardboard of suitable character and the type used shall be such as to make them easily legible.

Sec. 14. Any person, firm or corporation who shall, personally or through any agent, violate any of the provisions of this act, or who fails or

refuses to comply with any of its requirements, or who obstructs or interferes with any examination or investigation being made by the state department of factory inspection in accordance with the provisions of this act, or any employee who shall violate any of the provisions of this act, shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not less than twenty-five dollars (\$25.00) or more than two hundred dollars (\$200.00) and in each case shall stand committed until such fine and costs are paid, unless otherwise discharged by due process of law.

Sec. 15. In this act, unless the context otherwise requires, "employer" includes persons, partnerships and corporations.

PROCEEDINGS MEDICAL SECTION, A. M. A.

We publish below a brief report of the proceedings of the Medical Section of the Minneapolis meeting of the American Medical Association, prepared by one of our members. An effort was made to obtain similar descriptions of the work done in other sections. Next year we shall endeavor to present an account of the proceedings of the scientific work of the meeting in more extended form, as we believe all members would appreciate such condensed and epitomized information immediately following the session.

AN EPITOME OF THE PROCEEDINGS OF THE MEDICAL SECTION OF THE MINNEAPOLIS MEETING OF THE A. M. A.

Between thirty and forty papers were read in the Medical Section. These papers were, in the main, high-class scientific productions, some rather lengthy and technical, but withal bringing out new and important points pertaining to the various subjects discussed.

Many papers on related subjects were read and discussed in symposium, and this is becoming more popular, as it brings out and presents all sides and phases of the subject, and the general discussions are more thorough and comprehensive. Notably among the symposiums was the one taking up the different subjects involving cardio-vascular disease.

A symposium on leprosy of five papers, presented the different aspects, viz: clinical, dermatologic, bacteriology, therapy and public health, was very instructive.

A symposium on serums and vaccines, together with the thorough discussion of the papers, brought out probably all there is to be said on the subject to date. In this discussion Dr. John F. Anderson of Washington, D. C., spoke of the federal control over the manufacture of serums and vaccines. He stated that the act of Congress regulating the manufacture and interstate sale of viruses, serums and toxins had been of enormous value to the country, assuring the physician of the purity of the remedy used.

Dr. Frederick F. Russell presented statistics concerning "Typhoid Vaccination in the Army in 1912," which aroused great enthusiasm. His presentation of tables, showing the marvelous reduction in the occurrence of typhoid in vaccinated soldiers, being frequently interrupted by applause. A few of the author's striking figures are these: In the Franco-German war there were 75,000 cases of typhoid fever, with 7,000 deaths. In the Spanish-American war there were 1,580 deaths of typhoid fever, while only 243 were killed in action or died of wounds, this being before the era of preventive inoculation. Since vaccination has become compulsory in the army there has been

only one death from typhoid among those vaccinated, showing a practical elimination of typhoid fever from the army.

The subject of tuberculosis was thoroughly worked over by specialists in their lines, Dr. Victor C. Vaughn of Michigan taking up the "Value of Tuberculin Reaction in Early Diagnosis." Other phases of the subject were covered by papers from Drs. C. L. Minor of North Carolina, L. C. Peters of New Mexico, John W. Flinn of Arizona and others.

The scientific exhibit (which is of interest to all sections) was bigger and better than ever before. This year almost every exhibitor regarded it as an opportunity not to be lost to demonstrate to groups of visitors the lesson which his exhibit taught. It seems to be a foregone conclusion that if the scientific exhibit is given half an opportunity, in the way of location and space, it will become one of the best attended of all the activities of the Association. Among the more noteworthy exhibits the following should be mentioned: "Intestinal Parasitic Disease," by Kentucky State Board of Health; "Cancer in Plants," by United States Bureau of Plant Industry; Surgical Pathology and x-ray plates by the Mayo Clinic and others. There were many other highly interesting exhibits, but we regret that space forbids even a full enumeration, much less a detailed description of this most worthy and instructive feature of the meeting.

NOTABLE FEATURES ON THE PROGRAM OF HYGIENE CONGRESS

The Fourth International Congress on School Hygiene, and the first to be held in America, at Buffalo, August 25-30, according to an announcement of the executive committee, will be by far the most elaborate effort yet made in this country toward getting the problem of school hygiene before the world. The first international congress was held at Nuremberg in 1904, the second at London in 1907, the third at Paris in 1910.

The objects of the Buffalo congress are:

1. To bring together men and women interested in the health of school children.
2. To organize a program of papers and discussions covering the field of school hygiene.
3. To assemble a school exhibit representing the best that is being done in school hygiene.
4. To secure a commercial exhibit of practical and educational value to school people.
5. To publish the proceedings of this congress and distribute them to each member.

In addition there is a plan on foot to effect a permanent organization for the purpose of carrying out school hygiene reforms in all the individual communities in this country, if not all over the world.

One of the interesting features of the congress will be the presence of delegates representing the community interest in school hygiene, including those appointed by mayors and governors, by women's clubs, by school boards, boards of health, by mothers' congresses and charity organization societies and boards of trade. Their help is being solicited with a view of organizing the community in a campaign of school hygiene reform.

The program committee announces a program of 250 papers and fifteen symposiums, taking up hygiene from the following points of view:

1. The hygiene of school buildings, grounds, material and up-keep.
2. The hygiene of school administration and schedule.
3. Medical, hygienic and sanitary supervision in schools.

The contributors to the program make up a notable list of speakers, college presidents and professors; state, city and county commissioners of education; teachers and superintendents of public schools, medical college

professors; state, county and city health officers; physicians in private practice, engineers and architects.

Special discussions are being arranged on the following subjects:

School Feeding.—Arranged by the Committee on School Feeding of the American Home Economics Society.

Oral Hygiene.—Arranged by National Mouth Hygiene Association.

Sex Hygiene.—Arranged by the American Federation of Sex Hygiene.

Conservation of Vision in Schoolchildren.—Arranged by the Society for the Prevention of Blindness.

Health Supervision of University Students.—Arranged by Dr. Mazyck P. Ravenel, University of Wisconsin.

School Illumination.—Arranged by the Society of Illuminating Engineers.

Relation Between Physical Education and School Hygiene.—Arranged by the American Physical Education Association.

Tuberculosis Among Schoolchildren.—Arranged by the Society for the Prevention of Tuberculosis.

Physical Education and College Hygiene.—Arranged by the Society of Directors of Physical Education in Colleges.

The Binet-Simon Test.—Arranged by Professor Terman, Stanford University.

The Mentally Defective Child.—Arranged by Dr. Henry H. Goddard, Vineland, N. J.

Various citizens committees of Buffalo are arranging an elaborate entertainment for the benefit of visiting delegates. There will be receptions and a grand ball, a pageant of schoolchildren, and excursion trips to the great industrial plants of Buffalo, and to the scenic wonders of Niagara Falls. The Boy Scouts will act as official guides.

Delegates will attend from every college and university of note in this country, from other leading educational and hygienic institutions and organizations, and from every country in which an active interest is being shown in the welfare of schoolchildren, which includes all the leading nations of the world.

The congress is open to all persons interested in school hygiene on the payment of a fee of \$5. Application for membership should be sent to Dr. Thomas A. Storey, College of the City of New York, New York City.

President Wilson has accepted the honorary office of patron of the congress. The president of the congress is Mr. Charles W. Eliot of Harvard University. The vice-presidents are Dr. William H. Welch of Johns Hopkins University, and Dr. Henry P. Walcott, president of the recent International Congress on School Hygiene and Demography, and chairman of the Massachusetts State Board of Health.

IMPORTANT TO PHYSICIANS

If there be any profession in which Esperanto would be extremely useful, it is the medical profession. When Esperanto will have become more diffused among physicians we shall no longer witness those ridiculous international congresses in which every scientist speaks in a national tongue and is understood only by his own countrymen.

The important works of physicians of every country are now to be translated or summarized in one language, Esperanto; they will be understood at once and will be copied by newspapermen throughout the entire world.

Physicians of any country will be able to correspond with those of another without translators and consult each other about scientific subjects, professional questions, ethics, charges, rates, etc.

Perhaps, however, physicians will ask, will not a knowledge of three languages, English, French and German, suffice for that purpose? No, because apart from the actual difficulty of acquiring these languages, a knowledge of them does not permit relations with Russians, Italians, Japanese and those of other nationalities.

But here physicians may say, would not Latin answer the purpose? No; because that language is too little spread even among physicians, is written with difficulty, pronounced in a variety of ways according to countries, and not conformable to our present needs (it would be necessary to create many new words); finally because the same Latin word has often many different meanings, which would make translations difficult.

Esperanto is exceedingly easy; its grammar has no exceptions, and a physician after a few hours' study will know it sufficiently to write; after a few weeks he will be able to speak it fluently.

I have often heard my colleagues say: How will people be able to understand each other? An Englishman will speak Esperanto in such a way, a German in another, a Frenchman in yet another. No, that is not so, because in Esperanto every letter has always the same pronunciation. The tonic accent in every word is in the syllable next to the last. I feared that result myself, but I am now convinced that it is not true, because in the congress of Dresden I easily spoke in Esperanto with my German, English, Swedish, Danish and other colleagues. During the congresses in Cambridge, Dresden, Antwerp and Cracow physicians from more than ten nations could—thanks to Esperanto—sit in session and converse on various subjects.

An association has been founded to unite all Esperanto physicians; it is called T E K A, the letters of which stand for Tutmonda Esperantista Kuracisto Asocio, which in English means "Universal Esperanto Medical Association."

It is the duty of all Esperantist physicians to belong to this association, to sustain it by paying a small fee, and by enlisting new members. The annual subscription 2 spesimiloj—\$1—may be sent to the treasurer, Dr. George Johnston, 24 Seymour Street, Portman Square, London. For that contribution members will receive gratis the very interesting new international paper "Kuracisto" (Physician). A specimen can be obtained by sending an International Reply-Coupon to Dr. Chybezynski, Warsaw, Str. Szopena No. 1, Russia.

Dr. Briquet in *Espero Katolika*.

Translated by H. F. E.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.

of The Journal of the Missouri State Medical Association, published monthly at St. Louis, required by the Act of Aug. 24, 1912:

Editor: E. J. Goodwin, M.D., St. Louis. Publisher: Missouri State Medical Association, St. Louis. Owners: Missouri State Medical Association, composed of 3,116 physicians in the State of Missouri.

Known bondholders, mortgagees and other security holders, holding 1 per cent. of more of total amount of bonds, mortgages or other securities, none.

Average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date of this statement, 3,600.

E. J. GOODWIN, Editor.

Sworn to and subscribed before me this 26th day of June, 1913.

R. L. GURNEY,

[SEAL]

Notary Public.

SOCIETY PROCEEDINGS

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville Thursday, June 5, at 2 p. m. The meeting was called to order by Dr. H. Jerard, temporary chairman, with the following members present: Drs. T. W. Adair, H. S. Crawford, S. W. Fair, H. Jerard, M. P. Overholser, R. D. Ramey and J. S. Triplett. Superintendent C. A. Burke of the Harrisonville public schools was present as a guest of the society.

The regular scientific program was carried out as follows:

Paper, "Swat the Fly," H. S. Crawford, M.D. All members present took part in an extended discussion of this subject, which resulted in the appointment of a committee to prepare a bulletin on a card, instructing the public relative to the fly nuisance and how to exterminate them, and post these cards in every schoolhouse in the county and other public places. This committee is also to write an article on the fly as a carrier of disease and publish it in every newspaper in the county and endeavor to persuade the merchants to screen their foodstuffs, and to take up other sanitary matters.

"Chronic Osteomyelitis" was the subject of an interesting paper by S. W. Fair, M.D. It was a report of several cases coming under the observation of the doctor, and was illustrated with x-ray prints.

Dr. R. D. Ramey reported a very interesting clinical case to the society. The subject of "Scarlatina" was discussed by the members present, and many interesting points brought out. Dr. H. Jerard, delegate to the State Medical Association; Dr. Crawford and Dr. Overholser all made reports of the meeting.

This was a very enthusiastic meeting and will be productive of much good to the public.

H. S. CRAWFORD, M.D., Secretary.

DUNKLIN COUNTY MEDICAL SOCIETY

Dunklin County Medical Society held a meeting May 22 with fifteen members present. Dr. S. E. Mitchell resigned as treasurer and Dr. George Dalton of Maldon was elected to fill the vacancy. The society will adopt a revised constitution and by-laws at its next meeting.

Dr. Paul Baldwin read a paper on "The Objects of the Society." This was a splendid essay and elicited much friendly discussion. Dr. W. G. Hughes read a paper on "Importance of Medical Ethics." Dr. W. E. Handley read a paper entitled "Duties of Physicians to Patients." Dr. J. J. Drace read a paper entitled "Why Every Physician Should Be a Member." Dr. T. J. Rigdon contributed an interesting paper on "The Relation of the Society to Public Health."

All these papers were vigorously discussed, and the members exhibited a splendid spirit of enthusiasm toward medical society organization.

The next meeting will be held June 3.

T. J. RIGDON, M.D., Secretary.

GREENE COUNTY MEDICAL SOCIETY

Resolutions adopted at the meeting of June 13:

WHEREAS, Refraction of human eyes is an important branch of medical practice; and

WHEREAS, Owing to the inadequate teaching in our medical colleges and subsequent requirements of state medical examining and licensing boards in refraction, resulting in an inefficiency of physicians in this par-

ticular branch, though qualified in all others to practice; be it therefore

Resolved, That the Greene County Medical Society indorse the action of the Section of Ophthalmology of the American Medical Association, the action of the various state medical associations in seeking to qualify physicians in this branch to meet the people's needs, and the action of the Vermont, Nebraska and other state medical examining and licensing boards, requiring applicants to possess a working knowledge of refraction; and

Resolved, That the Greene County Medical Society request the Missouri State Board of Health that on and after Jan. 1, 1914, they require each applicant coming before them for a license to practice medicine to pass a satisfactory examination in refraction, and in order that students may become proficient in this knowledge a general notice should be given to all medical colleges of such requirement, that they may add the branch of refraction to their curriculum.

F. B. FUSON, M.D.

T. O. KLINGNER, M.D.

T. A. COFFELT, M.D.

HOWELL COUNTY MEDICAL SOCIETY

At a meeting of the Howell County Medical Society June 12 the chief subject discussed was "Pellagra," the unusual disease which has only recently made its appearance in this section.

Dr. J. C. B. Davis of Willow Springs read a paper on the subject, giving his recent experience in treating a case of the disease. The paper was very interesting and brought forth many questions and beneficial discussions.

Pellagra, which made its first appearance in America about six years ago, was, until that time, supposed to be endemic in Italy and was thought to result from eating impure corn foods. However, according to recent discoveries, it is now known to be a germ disease and is being treated as such.

The meeting of the society was held in the office of Drs. Nichols and Elliott and was presided over by Dr. J. H. Elliott. Besides the West Plains physicians—Drs. J. W. Bingham of Pottersville and H. J. Rowe and J. C. B. Davis of Willow Springs were present.

The Howell County Medical Society met in regular session in the office of Drs. Nichols and Elliott, West Plains, June 13, and, in the absence of Dr. Cunningham, the president, Dr. Elliott presided.

After the regular order of business Dr. J. C. B. Davis of Willow Springs read a paper on "Pellagra," which was very interesting and brought out several new points to the members. Pellagra has been recognized in Italy for a long time, and up to as late as 1903 Osler and others spoke of it as a disease endemic in Italy. It has been but a few years since it was recognized in this country in the Southern states and was thought to have been caused by eating bad bread or other foods made with musty or moldy corn. This theory has been exploded, and a specific germ is now known to cause this dread disease. The doctor presented a case of pellagra which he and Dr. Rowe, also of Willow Springs, had been treating for some months. While the patient seemed to be a little better than he had been, he is still in a very serious condition. The treatment so far has been symptomatic.

Present: Drs. J. C. B. Davis, H. J. Rowe, Willow Springs; J. W. Bingham, Pottersville, and James H.

Elliott, E. W. Wuesthoff, J. McB. Johnson, A. H. Thornburgh, West Plains.

The August meeting will be devoted to the social welfare of the society.

A. H. THORNBURGH, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society met in regular session at Lexington, the president, Dr. Braecklein, of Higginsville, in the chair.

A good number being present, much enthusiasm prevailed.

After the reading of the minutes of the previous meeting the society proceeded to dispose of the scientific program, which consisted of three papers:

"Control and Limitation of the Offspring," by Dr. Roberts.

"Sterility," by Dr. Chalkley.

"Ileocolitis," by Dr. Ramsey.

All the papers were extensively discussed.

No clinical material being on hand, the society proceeded with regular and miscellaneous business.

Physicians present were: Drs. Bracklein, Chalkley, Cope, Freddendall, Fulkerson, Mackey, McLennan, Ramsey, Roberts and Schneider.

The next regular meeting will be at Odessa, the second Tuesday in August. An interesting program has been arranged.

FERDINAND SCHREIMAN, M.D., Reporter.

LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society had one of the best meetings in its history on June 9. There were ten physicians present, and after a good dinner were in splendid condition to appreciate an excellent paper on "Parturition," by Dr. J. M. Billings.

The discussion was general and brought out quite a few experiences which were interesting and will be helpful when these men encounter similar conditions. The consensus of opinion was that the average physician of this county, doing general practice, was deficient in his ability to diagnose early and rightly the presentation. It is taken for granted that Laclede county physicians are of average ability, and if they need improvement in this particular there may be others.

A paper on "Summer Diseases of Children," by Dr. C. E. Carleton, was both interesting and instructive. Make the food fit the patient, not the disease. Use antiseptics of which the market is well supplied, and support the little one, were the high notes of the paper.

The secretary was instructed to arrange for a joint meeting with the Pulaski County Medical Society for July.

J. A. McCOMB, M.D., Secretary.

MORGAN COUNTY MEDICAL SOCIETY

The Morgan County Medical Society held its regular meeting July 15, 1913, at the Commercial Club rooms, Versailles.

Drs. Gunn, Lutman, Woods and Osborne of Versailles, and Drs. Wheat and Hatler of Barnett were present.

Dr. H. N. Lutman read a paper on "Diagnosis and Treatment of Gall Stones." Dr. Lutman showed the frequency with which diseases of the gall bladder and ducts were unrecognized, and discussed in detail the

diagnosis of these conditions with special reference to gall stones. The surgical treatment was advocated in all cases; medical treatment was considered at some length. The discussion was opened by Dr. P. G. Woods.

Dr. C. D. Osborne presented a paper on "The Practicability of the Rural Hospital," giving special reference to the needs of Versailles. A general discussion followed.

The Board of Censors having reported favorably on the application of Dr. Wm. Well, Versailles, the doctor was elected to membership.

The society adjourned at the call of the president.

C. D. OSBORNE, M.D., Secretary.

PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society met July 2 in the office of Dr. Spence Redman, at Platte City. Three visitors were present from St. Joseph, Drs. A. L. Gray, Samuel Paul and Howard Spencer. In the absence of Dr. M. H. Moore, president, Dr. Naylor opened the meeting.

Dr. Gray of St. Joseph read a paper on "Etiology and Treatment of Puerperal Eclampsia," compiled from a series of 1,100 cases. The paper was enjoyed very much by society members and visitors. Many practical hints were given to country physicians. A general discussion then ensued by all members present.

On invitation Dr. Spencer read a very unique paper on the extirpation of fat from the abdominal wall and reported a case with illustrations. This rare surgical procedure was of much interest to the society.

Dr. Paul of St. Joseph gave an impromptu talk on gonorrhea. Many practical points were brought out in the discussion which followed.

The hour being late, the papers that were to be read by Drs. Wilson and Redman were postponed until another meeting.

Resolutions were read and adopted to create a Department of Health with an executive as a member of the President's cabinet. The secretary was instructed to spread these resolutions on the minutes, a copy to be sent to Mr. Booker, congressman, and a copy to the secretary of the Missouri State Medical Association.

Resolutions were read and adopted that Dr. J. B. Willis of Farley, Mo., be asked to resign his membership in the Platte County Medical Society. The secretary was instructed to ask Dr. Willis to tender his resignation to the society.

All business having been disposed of, the society adjourned to meet in Platte City August 6, where a scientific and public health meeting will be held.

LOUIS C. CALVERT, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at Dr. Stufflebam's residence, Humansville, at 10:30 a. m., June 10, and was called to order by Dr. Paris, the president.

The following members were present: Drs. R. W. Paris, J. E. Loafman, J. F. Roberts, W. D. Drake, A. J. McLaughlin, W. T. Meyers, John W. Coy, C. H. Brown, C. N. Hahn, R. Lee Russell, J. A. Stufflebam, R. D. Dill; also Drs. C. W. Russell, S. A. Johnson and Roseberry of Springfield and Dr. Gentry of Weaubleau.

After the reading and approval of the minutes of last meeting Drs. McLaughlin and Paris presented

clinical cases of lowel trouble and meningocele, which were examined and the cases discussed.

Dr. C. H. Lundy's application for membership was reported favorably by the Board of Censors.

Dr. J. A. Stufflebam gave an illustration of a new adhesive strap splint for fractures at the elbow, and its merits were discussed by the society.

On motion Drs. S. A. Johnson and C. W. Russell of Springfield were elected honorary members of the society.

Dr. Paris reported a case of operation for appendicitis with an exhibition of the excised appendix with favorable results in his own son.

Some cases of blood poisoning were reported by Dr. C. N. Hahn. A discussion of these cases followed.

The ladies announced that dinner would be the next thing on the program, which was served on the lawn in an elegant and liberal manner and enjoyed by all. The social features were supplanted by a snap-shot picture of the group of doctors and their wives.

At the afternoon session some clinical cases were discussed, after which Dr. S. A. Johnson read a very interesting paper on "Some Primitive Facts in Psychiatry" and Dr. C. W. Russell on "Intermittent Hydro-Nephrosis." A general discussion followed.

Dr. John W. Coy read a paper on "High Pressure of Living," and Dr. J. E. Loafman read a paper on "Who Ate the Body of Roger Williams?"

Dr. Drake reported a case of strangulated hernia, and Dr. McLaughlin a case of excessive vomiting of pregnancy.

The society extended a vote of thanks to Dr. Stufflebam and the ladies for their elegant entertainment.

On motion the society adjourned to meet at Bolivar on the second Tuesday in September.

J. F. ROBERTS, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at the office of Drs. Potter and Potter, Lancaster, Friday, June 20, at 2 p. m.

The meeting was called to order by the president, Dr. B. B. Potter. Members present: Drs. B. B. Potter, W. A. Potter, W. F. Justice, J. H. Keller, A. J. Drake and J. B. Bridges. Visitors: Drs. A. E. Platler, E. E. Parish and H. C. Finch, of Memphis, Mo.

A number of cases of interest were reported and discussed.

No papers having been prepared for this meeting, the time was occupied in discussing ways and means for our coming public meeting. The place and time for holding this meeting is Lancaster, August 21, at 8 p. m. Dr. F. J. Lutz of St. Louis will deliver a lecture on "The Relation of the Medical Profession to the Laity." Besides Dr. Lutz there will be addresses by local speakers.

A move was made to organize a tri-county medical society composed of Clark, Scotland and Schuyler counties, and a meeting was appointed for June 24, at 2 p. m., at Memphis, to perfect the organization.

J. B. BRIDGES, M.D., Secretary.

ST. FRANCOIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Francois County Medical Society was held at Flat River July 15, Dr. H. P. Poston presiding.

Those present were Drs. C. P. Poston, H. P. Poston, G. L. Watkins, Ben. R. Downing, Ben. Williams, M.

H. Topping, M. B. Barlow, T. L. Haney, W. S. Hutton, J. H. English, John G. Turley, O. A. Smith and B. J. Robinson.

The program was excellent. The case of aneurism presented by Dr. C. P. Poston, with history and the remarkable results he is getting by percussion of the seventh cervical vertebra, as advocated by Dr. Abrams of San Francisco, was the most interesting scene in our society for years.

The papers of Drs. W. S. Hutton on "Maniac Depression Insanity," and M. H. Topping on "Mercury," were enjoyed by all and liberally discussed.

The society expressed its appreciation of the good work being done by the Mothers' Club of Flat River in trying to stamp out tuberculosis and looking after the sanitary conditions of the lead belt towns.

A motion was passed to meet at Flat River August 12, and try to increase the membership to include all ethical men in the county. Matters of importance to the lead belt physicians will be taken up at the next meeting.

B. J. ROBINSON, M.D., Secretary.

WAYNE COUNTY MEDICAL SOCIETY

Wayne County Medical Society met in regular session in Piedmont at the office of Dr. L. E. Toney, June 17. The president, Dr. G. W. Toney, presided.

The following members were present: Drs. C. W. Toney, J. E. Gilmer of Piedmont, Wm. S. Bailey of Leeper, R. J. Owens of Mill Spring and J. P. Sebastian of Williamsville.

The names of Drs. Edwin E. Whitesides of Des Arc, John F. Wagner and Edgar E. Whitesides of Greenville were proposed for membership in the society and were elected.

The question of adopting a uniform fee bill was discussed. A list of prices for certain work was gone over and made out, same to be submitted at the next regular meeting.

The question of publishing the fee bill in the local papers was discussed, but no definite action was taken, as the pros and cons seemed to be about equally divided.

Some discussion as to a permanent place of meeting was given, but no agreement on that point was reached.

The meeting adjourned to meet at Williamsville July 15. R. J. OWENS, M.D., Secretary *pro tem*.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Elkland, June 18, 1913. After taking dinner at the hotel, meeting was called to order by the president, Dr. E. M. Bailey.

To the roll call the following responded: Drs. McHaffie, Rabenau, Good, Schlitch, Bailey, Beattie, Highfill and Bruce. Dr. Edmundson of Fair Grove was a guest.

Dr. M. T. Edmundson, Fair Grove, was elected an honorary member of the society.

It was voted to hold the next meeting at Marshfield, September 17.

Dr. W. J. Rabenau, alternate to state meeting, gave a detailed report of the meeting held in St. Louis last month.

Meeting opened to general discussion of clinical cases and treatments.

JOHN R. BRUCE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

This department presents in concise form facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Non-official Remedies." Under "Reform in Medicines" appear matters tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 North Dearborn street, Chicago, Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Non-official Remedies."

EMETINE HYDROCHLORIDE.—Emetine Hydrochloride is the hydrochloride, $C_{30}H_{44}N_2O_3 \cdot 2HCl \cdot 2H_2O$, of an alkaloid found in ipecac. It occurs as a white crystalline powder, soluble in water, yielding a neutral solution. Emetine Hydrochloride acts similarly to ipecac but is relatively more nauseant and less emetic, and causes relatively less renal irritations, but more cardiac depression. Emetine Hydrochloride in the form of injections has been reported to be of especial value in amebic dysentery.

EMETINE HYDROCHLORIDE MERCK.—Merck & Co., New York.

AMPULS EMETINE HYDROCHLORIDE, MULFORD.—Each ampul contains emetine hydrochloride 30 mg. H. K. Mulford & Co., Philadelphia, Pa. (*Jour. A. M. A.*, July 5, 1913, p. 27).

ACNE VACCINE.—For description of Acne Vaccine see N. N. R., 1913, p. 221. Greeley Laboratories, Inc., New York City.

COLON VACCINE.—For description of Bacillus Coli Vaccine see N. N. R., 1913, p. 221. Greeley Laboratories, Inc., New York City.

PYOCYANEUS VACCINE.—For description of Bacillus Pyocyaneus Vaccine see N. N. R., 1913, p. 222. Greeley Laboratories, Inc., New York City.

GONOCOCCUS VACCINE.—For description of Gonococcus Vaccine see N. N. R., 1913, p. 223. Greeley Laboratories, Inc., New York City.

MENINGOCOCCUS VACCINE.—For description of Meningococcus Vaccine see N. N. R., 1913, p. 223. Greeley Laboratories, Inc., New York City.

PNEUMOCOCCUS VACCINE.—For description of Pneumococcus Vaccine see N. N. R., 1913, p. 224. Greeley Laboratories, Inc., New York City.

STAPHYLOCOCCUS ALBUS VACCINE.—Greeley Laboratories, Inc., New York City.

STAPHYLOCOCCUS AUREUS VACCINE.—For description of Staphylococcus Vaccine see N. N. R., 1913, p. 225. Greeley Laboratories, New York City.

STREPTOCOCCUS VACCINE.—Greeley Laboratories, Inc., New York City.

STREPTOCOCCUS ERYSIPELATIS VACCINE.—For description of Streptococcus Vaccine see N. N. R., 1913, p. 226. Greeley Laboratories, Inc., New York City.

TYPHOID BACILLUS VACCINE.—For description of Typhoid Bacillus Vaccine see N. N. R., 1913, p. 227. Greeley Laboratories, Inc., New York City.

TUBERCULIN, B. E.—For description of New Tuberculin, Koch, Bacilli Emulsion ("B. E.") see N. N. R., 1913, p. 233. Greeley Laboratories, Inc., New York City (*Jour. A. M. A.*, July 5, 1913, p. 27).

DIPLOSAL.—Diplosal is the salicylic ester of salicylic acid, $HO \cdot C_6H_4 \cdot COO \cdot C_6H_4 \cdot COOH$. It is white, almost tasteless and almost insoluble in water. While diplosal is insoluble in dilute acid, it is soluble in alkaline liquids with gradual liberation of salicylic acid, accordingly it passes the stomach unchanged, but is readily absorbed in the intestine. Diplosal may be used where salicylic acid or salicylic acid derivatives are indicated. It is marketed as a powder and in tablets.

DIPLOSAL TABLETS, 7½ GRS.—Each tablet contains 0.5 gm. diplosal. Merck & Co., New York (*Jour. A. M. A.*, July 12, 1913, p. 121.)

REFORM IN MEDICINES

PHYSICIANS AND THE PHARMACOPEIA.—Believing that it is the province of the medical profession to designate the drugs that shall be included in the Pharmacopeia, the Section on Pharmacology, at the recent meeting of the American Medical Association, adopted the following resolution:

"*Resolved*, That the Section request the House of Delegates of the American Medical Association to urge on the Committee of Revision of the Pharmacopeia of the United States that the selection of articles to be included be left to the Committee on Scope, in which the medical profession has a majority representation, rather than to the Executive Committee, which represents mainly the pharmaceutical profession, and which has overridden half the changes advocated by the Committee on Scope."

The resolution was endorsed by the House of Delegates (*Jour. A. M. A.*, June 28, 1913, p. 2086).

PURE DRUGS.—With a view of emphasizing the need of a more vigorous enforcement of laws, federal and state, relating to pure drugs, the Section on Pharmacology at the recent meeting of the American Medical Association adopted the following motion:

"*Resolved*, That the Section on Pharmacology and Therapeutics requests the House of Delegates of the A. M. A. to bring this matter to the attention of the proper federal and state authorities, and urge on them the need for more energetic and effective action in this direction."

The motion was endorsed by the House of Delegates, which also advised that the matter of securing the enforcement of state laws should be taken up by the individual state associations. (*Jour. A. M. A.*, June 28, 1913, p. 2086.)

THE COUNCIL ON PHARMACY AND CHEMISTRY.—Torald Sollmann reviews the preliminary work of the Council on exposing the abuses which had crept into the exploitation and marketing of proprietary medicines, and outlines its present efforts to bring about a more rational use of medicines, as illustrated by the issuance of a book on "Useful Remedies," and publication of a series of articles on the possibilities and limitations of vaccine therapy. In discussing the

results of the work, Sollmann points out that while conditions are not as they should be, they have improved vastly. Secret nostrums, worthless remedies, blatant advertisements and extravagant claims have not been suppressed, and while some frauds have sunk into oblivion others have arisen. It is significant, however, that new nostrums are not appearing at the former rate. Remedies are used with more discretion. Testimonials of worthless drugs are not given with liberality by careless, if well-meaning, physicians; the tone of the advertisements has become much less extreme, the claims much more conservative. All this means that the profession is more critical, less inclined to believe that the latest advertised fad must be best; less reliant on biased manufacturers as the exclusive source of therapeutic information. The interest in exact therapeutic observation and experiment is much greater. The teaching of these subjects in our medical schools has vastly improved. (*Jour. A. M. A.*, July 5, 1913, p. 5.)

NUTRIENT ENEMA.—The daily urinary nitrogen output of patients receiving enema of eggs or milk "peptonized" a few minutes failed to give evidence of more than traces of absorbed protein products. Amino-acids prepared from milk by digestion for twenty-four hours with a vigorous pancreatic enzyme were apparently well absorbed. Dextrose was absorbed better than lactone and checked the losses due to inanition. For patients suffering from gastric ulcer, useful enemas can be prepared by vigorous pancreatic predigestion of milk, with subsequent addition of 5 per cent. of dextrose. (*Jour. A. M. A.*, July 12, 1913, p. 123.)

THE TOXICITY OF DIPLOSAL.—Dr. John MacLachlan reports clinical tests which show that, contrary to the claim of the manufacturer, diplosal, if given in the same manner as other salicylates, produces the same symptoms of toxicity and with equal severity. The drug was administered by mouth in capsules. The tests show that not only is diplosal toxic, but smaller doses suffice to produce the toxic effects than are required with sodium salicylate. While the average toxic dose for sodium salicylate was found to be 190 grains, the toxic dose of diplosal was found to be 92.2 grains. (*Jour. A. M. A.*, July 12, 1913, p. 116.)

DIPLOSAL.—Diplosal, salicyl-salicylic acid, has been marketed with the claim that it does not produce gastric and other "toxic" effects of salicylic compounds. As this claim was questionable, Dr. John MacLachlan made, for the Council on Pharmacy and Chemistry, a series of clinical tests which showed that diplosal produced the toxic as well as the anti-rheumatic effects in approximately half the dose of sodium salicylate. A similar series of tests made in Germany for the manufacturer of diplosal also showed toxic effects, but from them it appeared that the toxicity was less than that of sodium salicylate. The manufacturer of diplosal having agreed to give publicity to the results of Dr. MacLachlan as well as to those obtained in Germany, the Council voted to accept diplosal for inclusion with New and Non-official Remedies. (*Jour. A. M. A.*, July 12, 1913, p. 127.)

CARELESSNESS IN PHARMACY.—M. I. Wilbert tabulates the reports of federal and state authorities on the quality of pharmaceutical products found in pharmacies. The large proportion of unsatisfactory prod-

ucts found he ascribes to indifference or carelessness engendered by the countless variety of medicinal preparations which the pharmacist must keep in stock. He believes that in a shop devoid of "side-lines," that is, equipped with the necessary analytical apparatus, it would be possible to exercise efficient control over a reasonable number of well-defined medicaments. He thinks that a more restricted materia medica will do much to improve the quality of drugs. (*Jour. A. M. A.*, July 19, 1913, p. 189.)

TOXIC EFFECTS OF LUMINAL.—Two cases are reported which seem to show that the use of Luminal is likely to lead to some difficulty when repeated doses are given. In the cases reported the action of the drug did not make itself manifest until an accumulative reaction had set in, which then produced untoward symptoms. The maximum dose, 0.8 gm., given by the manufacturers, should not be exceeded. (*Jour. A. M. A.*, July 19, 1913, p. 192.)

KEEPING QUALITIES OF DIGITALIS AND ITS PREPARATIONS.—The strength of digitalis and digitalis preparations depends on their keeping qualities and on the manner in which these have been treated or prepared. As the crude drug varies considerably, digitalis preparations should be made from physiologically assayed drugs. Fluidextract of digitalis is difficult to prepare and generally unreliable, as is also the pseudotincture made therefrom. Preparations containing little alcohol, as the infusions, are likely to deteriorate. The low alcohol content of digalen may explain its variability. The wide-spread view that digitalis leaves, fluidextract and tincture of digitalis are prone to rapid deterioration is unfounded. (*Jour. A. M. A.*, July 19, 1913, p. 202.)

MISBRANDED DRUG PREPARATIONS.—The federal authorities have issued "Notices of Judgment" for misbranding under the Food and Drugs Act, in regard to the following: Denton's Healing Balsam, Allan's Compound Extract of Damiana, Hamburg Stomach Bitters, Dr. Bennett's Wonder Oil and Pale Orange Bitter. (*Jour. A. M. A.*, July 19, 1913, p. 211.)

CASOID FLOUR.—J. P. Street having stated that Casoid Flour, an article accepted for New and Non-official Remedies, contained 2.2 per cent. carbohydrates, the secretary of the Council on Pharmacy and Chemistry states that the article was free from sugar and starch when accepted by the Council, and that a specimen recently examined in the Association's laboratory was also found free from sugar and starch. (*Jour. A. M. A.*, July 19, 1913, p. 212.)

SERUM TREATMENT OF MENINGITIS.—After years of study the Rockefeller Institute has issued a report on the treatment of epidemic meningitis. From the available records of the mortality of the epidemics which prevailed in the United States and Canada in 1904 to 1909 and in the winters of 1911 to 1913, the record of fatalities is above 70 per cent. Similarly the epidemics in foreign countries have given a death rate above 70 per cent. The analysis of the results in 1,300 cases treated with serum supplied by the Rockefeller Institute shows that the mortality of epidemic meningitis can be greatly reduced by the serum treatment. While the average mortality during the epidemic was 70 per cent., that in the serum treatment cases was about 30 per cent. The success of the treatment depends on the age of the patient and the period of the disease when the subdural injections are begun. (*Jour. A. M. A.*, July 26, 1913, p. 281.)

"NULIFE."—An illustrated price list being sent to physicians by Truax, Greene & Co. devotes space to the

exploitation of "Professor Charles Munter's Nulife Shoulder Braces and Supporters." Nulife, physicians are told, "makes the weak strong and happy, the strong impervious to common ills." Those who wear "Nulife" "cannot possibly become sick or overheated." Furthermore we learn that "the human body represents the most perfect system of circulation and ventilation ever created, but unfortunately this system of ventilation and circulation is frequently impaired by careless individuals who allow their 'shoulders to droop downward,' which results, according to Truax, Greene & Co., in 'congealing the intestines.'" The matter presented for the information of physicians is so full of misstatements of facts that even the advertising copy-writers of rank patent medicines would be ashamed to stand sponsor for it. (*Jour. A. M. A.*, July 26, 1913, p. 292.)

ENESOL.—Enesol has been claimed to be a salicyl arsiniate of mercury, a molecular combination of monomethyl arsinic acid and a double salicylate of mercury and sodium, but no definite formula for the compound has been furnished. Enesol was considered by the Council on Pharmacy and Chemistry and refused recognition because the origin and composition were not given, because the manufacturer had made misstatements regarding the identity of the preparation and because the advertised composition did not agree with that found by analysis in the Association's laboratory. (*Jour. A. M. A.*, July 26, 1913, p. 293.)

BOOK REVIEWS

MEDICAL DISEASES OF CHILDREN. By T. R. C. Whipple, M.A., M.D. (Oxon), M.R.C.P.; Physician to the Evelina Hospital for Sick Children, etc. Illustrated. 417 pages. New York: University of London Press.

A delightful résumé of the diseases of children in an attractive and convincing style. The eighteen chapters ably cover the premises and constitute an exceedingly valuable addition to the physician's library.

EPIDEMIC CEREBROSPINAL MENINGITIS. By Abraham Sophian M.D.; formerly with New York Research Laboratory. Illustrated. 272 pages. St. Louis: C. V. Mosby Company, 1913.

The six chapters comprising this most interesting volume are devoted to the etiology, symptomatology, laboratory diagnosis and studies on blood pressure and treatment.

This is said to be the only monograph in English on cerebrospinal meningitis.

MINOR SURGERY. By Leonard A. Bidwell, F.R.C.S., Senior Surgeon to the West London Hospital, etc. Second edition, revised and enlarged. Illustrated. 299 pages. New York: University of London Press.

This second volume follows within twelve months of the first—an eloquent recommendation. Much new matter is included in the later edition, besides a chapter on bandaging and the treatment of minor injuries.

The typography of the volume is all that could be desired.

HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. A manual of practical psychotherapy, designed especially for the general practitioner of medicine and surgery. By Henry S. Munro, M.D., Omaha, Neb. Third edition, revised and enlarged. 409 pages. St. Louis: C. V. Mosby Company, 1912.

Suggestive therapeutics is well presented herein, but we confess to a decided distrust of the methodical application of suggestion in the treatment of disease.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume II, Number II. (April, 1913). Octavo, 171 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Published Bi-Monthly. Price per year: Paper, \$8.00; cloth, \$12.00.

Containing twenty reports on cases of duodenal, gastric and pyloric ulcer; hemorrhage of the uterus; duodenal block; cerebellar tumor, and ureteral calculus, with fracture cases and other reports.

GOLDEN RULES OF DIAGNOSIS AND TREATMENT OF DISEASES. Aphorisms, observations and precepts on the method of examination and diagnosis of diseases, with practical rules for proper medical procedure. By Henry A. Cables, B.S., M.D., Professor of Medicine and Clinical Medicine of the College of Physicians and Surgeons, etc. Second edition, revised and rewritten. 318 pages. St. Louis: C. V. Mosby Company, 1913. \$2.25.

The second edition contains much new matter and is a most satisfactory ready reference book for the physician. A chapter on infectious diseases has also been added.

VACCINE AND SERUM THERAPY, including also a study of infection, theories of immunity, specific diagnosis and chemotherapy. By Edwin Henry Schorer, B.S., M.D., Dr.P.H.; formerly Assistant Thomas Wilson Sanatorium for Children, Mt. Wilson, Md., etc. Second edition, 300 pages. St. Louis: C. V. Mosby Company. Cloth, \$3.00.

This edition takes cognizance of the changes that have taken place in vaccine and serum therapy since the appearance of the first edition, four years ago.

The five chapters of the volume give an excellent presentation of vaccine and serum therapy of the present time.

TUBERCULIN IN DIAGNOSIS AND TREATMENT. By Francis Marion Pottenger, A.M., M.D., LL.D.; Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, Cal. Illustrated; pp. 241. C. V. Mosby Company, St. Louis, 1913.

A most interesting monograph comprising twelve chapters which are devoted to a consideration of all the aspects of tuberculin treatment of tuberculosis.

The volume presents the author's results in treatment of about 2,000 patients.

The author claims that the benefits of tuberculin treatment are derived when it is employed as supplementary to hygienic and tonic measures. Tuberculin is by no means to be regarded as the primary treatment.

MEDICAL MEN AND THE LAW. A Modern Treatise on the Legal Rights, Duties and Liabilities of Physicians and Surgeons. By Hugh Emmett Culbertson, Esq., Member of the Ohio and New York Bars; Contributing Editor to many legal publications. Octavo, 325 pages. Cloth, \$3.00 net. Lea & Febiger, Philadelphia and New York, 1913.

This is a work that every physician and surgeon should possess. It is a practical digest of medical jurisprudence, presenting the legal phases of medical ethics, as concern the physician and his fellow practitioner and the medical man and his patient.

Familiarity with the contents of this volume will save the physician needless worry oftentimes, and also enable him to steer clear of those technical pitfalls in which the law abounds.

TREATMENT OF DISEASES IN CHILDREN. By G. A. Sutherland, M.D., F.R.C.P.; Physician to Paddington Green Children's Hospital, etc. 403 pages. Second edition. Oxford University Press, New York, 1913.

This edition contains new sections on the acute specific fevers and on skin diseases. New methods of treatment, personally tested by the author, are described.

In treatment, one definite line of procedure is given in preference to an enumeration of all the remedies that may be employed.

The first edition was perhaps too brief in its consideration of pediatric pathology, and the present volume further improves on the former edition by a greater devotion to pathologic detail.

THE MODERN HOSPITAL: ITS INSPIRATION; ITS ARCHITECTURE; ITS EQUIPMENT; ITS OPERATION. By John A. Hornsby, M.D., Secretary Hospital Section, American Medical Association; Member American Hospital Association, etc., and Richard E. Schmidt, Architect, Fellow American Institute of Architects. Octavo volume of 644 pages, with 207 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$7.00 net; half morocco, \$8.50 net.

A very complete volume on hospital management. Its breadth combined with its exactness make it a valuable work.

A splendid index puts the contents of the volume within immediate reach of the reader.

The typography is excellent and the illustrations are well chosen.

NERVOUS AND MENTAL DISEASES. For Students and Practitioners. By Charles S. Potts, M.D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia; Associate in Neurology in the University of Pennsylvania. Third edition, revised and enlarged. Lea & Febiger, Philadelphia and New York.

For those whose need, in dealing with nervous and mental diseases, is a short and simple description of each disorder, with some practical suggestions as to management, Dr. Potts' book has been and will continue in this third edition to be very useful. While none of the well-known diseases of the nervous system, or the methods of their diagnosis and treatment, has

been elaborated fully, none is slighted. Dr. Potts quite fairly expresses the consensus of neurological opinion among those who occupy the rational middle ground. We commend this book as a ready reference volume of definite merit.

THE REDUCTION OF DOMESTIC FLIES. By Edward Halford Ross, M.R.C.S., England; L.R.C.P., London, etc. Author of "The Reduction of Domestic Mosquitoes." "The Prevention of Fever on the Suez Canal." Illustrated, 103 pages. Philadelphia and London: J. B. Lippincott Company, 1913.

This book is by far the most scientific work on the fly yet published; at the same time it is a practical treatise on the life of the fly and his pathological results. The life, habits and history of the fly are taken up and treated in a novel manner never before attempted. The author has had large experience in the study of insects as disease carriers. The chapter on "How to Reduce Flies" and the sanitary education urged justifying the expenditure of money and energy show practical thought and thorough methods for the saving of life through sanitation. This book is a valuable addition to the library of every health officer and physician.

THE NARCOTIC DRUG DISEASES AND ALLIED AILMENTS. Pathology, Pathogenesis and Treatment. By Geo. E. Pettey, M.D., Memphis, Tenn. Illustrated. F. A. Davis Company, Philadelphia, 1913.

There is much speculation as to pathology and pathogenesis set down somewhat dogmatically as proved facts in this moderate-sized volume. It impresses the reviewer as having been written by one whose time has been quite busily occupied in dealing at immediate first hand with the addict of alcohol and drugs, and not engaged in the broader field of psychiatry and neurology. Alcoholics and drug-users are so frequently defectives by nature and defective before beginning the use of such agents and after so-called cure.

The book certainly serves a useful purpose to map out a plan whereby such persons can be most safely and painlessly relieved of the toxic state produced by alcohol and drugs, and this Dr. Pettey has quite fully done. His plan is the outgrowth of the work of many men in this field and has the sanction of those informed as to this class of cases.

ORGANIC AND FUNCTIONAL NERVOUS DISEASES. By M. Allen Starr, M.D., P.H., LL.D., Sc.D.; Professor of Neurology, College of Physicians and Surgeons, the Medical Department of Columbia University in the City of New York; Consulting Neurologist to the Presbyterian Hospital and to St. Mary's Free Hospital for Children. Author of "Familiar Forms of Nervous Diseases." "Brain Surgery" and "Atlas of Nerve Cells." Fourth edition. Thoroughly revised. Illustrated. Lea & Febiger, New York and Philadelphia, 1913.

The need for a fourth edition of this most excellent book has given Dr. Starr an opportunity to thoroughly revise and bring down to the present year the most

recent and reliable information in nervous diseases. As a teacher and active clinical worker in neurology for over thirty years, Dr. Starr has had extraordinary opportunities to form accurate judgments in the pathology, symptomatology and treatment of nervous diseases.

In cord and brain localization, in neuropathology, in planning if not actually performing some of the best modern surgery of the brain and cord, Dr. Starr has won world-wide recognition.

The reviewer has long been familiar with Dr. Starr's active work in the American Neurological Association, which is usually the first organization to hear discussed the most recent advances in knowledge of nervous diseases. For students, practitioners and neurologists Starr's "Organic Functional Nervous Diseases" will furnish clear, accurate and satisfying information.

KEEN'S SURGERY, Volume VI: The Volume with the Newest Surgery. By eighty-one eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Octavo of 1,177 pages, with 519 illustrations, 22 in colors. Philadelphia and London: W. B. Saunders Company, 1913. Entire work, consisting of six volumes, per volume: Cloth, \$7.00 net; half morocco, \$8.00 net.

In Volume VI of Keen's Surgery the same authors, with some exceptions, have brought their respective subjects up to date. Each chapter is a supplement to a corresponding chapter in a previous volume, to which proper reference is made.

Many new subjects are treated, such as Crile's anoxi-association, differential pressure cabinets, intra-tracheal insufflation, intravenous ether anesthesia, surgery of the hypothesis, treatment of cancer by fulguration, Beck's bismuth paste, Lane's bone-plates, bone grafting and transplantation, Lane's kink, and even the interesting experiments of Wassermann in the treatment of cancer. Many references to the text of the original volumes help to associate the new and the old text properly.

A bibliography is given at the end of each chapter. A general index of the whole six volumes is found in this last volume which facilitates the finding of desired information.

The volume reviews the surgical literature to date and makes the system a most modern one without the necessity of purchasing an entirely new work. No one who owns the original five volumes can afford to be without this new supplement. Furthermore, it is a valuable reference work, independent of the original volumes, and will prove an instructive and interesting review of the newer surgery.

THE MODERN TREATMENT OF NERVOUS AND MENTAL DISEASES. By American and British Authors. Edited by Wm. A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C. Lecturer on Mental Diseases, U. S. Army and U. S. Navy Medical School, Washington, D. C.

Smith Ely Jelliffe, A.M., M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System in the Post-Graduate Medical School and Hospital, Consulting Neurologist to the Manhattan State Hospital. Vols. I and II. Illustrated. Lea & Febiger, New York and Philadelphia, 1913. Per volume, \$6.00 net.

Possibly there are no men in this country more familiar with neurologic and psychiatric literature, nor better acquainted with the work and writings of men active in both neurology and psychiatry, than are White and Jelliffe. Both are writers of exceptional ability and constructive critics of keen discernment. As managing editor of the *Journal of Nervous and Mental Diseases* Dr. Jelliffe has long been accustomed to pass in review the best of the world's production in neurology. Dr. White is a careful student and always takes the sound middle ground position in contested questions. His "Outlines of Psychiatry" has become a standard in many state hospitals. It is, therefore, quite to be expected that a work planned by Drs. Jelliffe and White would be, as "Modern Treatment" thus far impressed the reviewer, carefully written by competent men, each especially expert in the subject written on; a well-balanced, well-edited exposition of the literature of nervous and mental diseases.

The modern development in eugenics is well presented by Dr. White. Dr. Goddard writes as he talks—cleverly and with the sureness of thorough knowledge of the feeble-minded. Henry A. Cotton, E. E. Southard, Adolf Myer, James V. May and many others of established reputation in their respective fields give the generally accepted version in each subject considered.

The second volume fully bears out the expectation created by the announcements and by the first volume. Too often in the past have the text-books on this subject been devoted to description to such an extent that treatment was almost neglected. The query of the country doctor who, after listening to a learned dissertation on chronic interstitial nephritis and hearing almost nothing about treatment, asked, "What are we going to do for it?" has always appealed to us as eminently practical. The great group of medical men who deal with these disorders want to know what is to be done and are little interested in the polemics of the specialists unless at the last they have something to appease the cry for relief which comes from the victims of nervous and mental maladies. We feel that very great help will be given by this two-volume work to physicians who will diligently peruse the special articles prepared by men whose experiences have prepared them to best answer the query, "What is to be done?" Not to single out individual articles, but to indicate those especially interesting to the reviewer, are Sherren's "Treatment of Injuries to Peripheral Nerves," in which most excellent diagnostic directions are given; Jelliffe's discussion of "Head-aches," and description of the "Treatment of Syphilitic Diseases of the Nervous System," and Halstead and Vaughn on "Surgery of the Brain and Cord."

We commend this collection of monographs as containing probably the best guide to management of nervous diseases yet published.

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ORIGINAL ARTICLES

ARTERIAL HYPERTENSION: ITS PATHO- GENESIS*

SCOTT P. CHILD, M.D.
KANSAS CITY, MO.

It is quite generally accepted that arterial hypertension in its usual or chronic form is an expression of local or general cellular and tissue change in the arterial system, developed for the purpose of maintaining the body in a state of health. As Sir Clifford Allbutt¹ says of arteriosclerosis specifically, so in arterial hypertension, we are dealing not with a *maladie*, but with symptoms, the results of processes which may be toxic, degenerative or the sequel to specific infections.

It is of great significance that as normal blood-pressure is for the purpose of distributing blood and nutriment to the tissues of the whole body in health, so arterial hypertension develops and persists that otherwise poorly nourished or diseased organs may be supplied with necessary blood and food. The possible accident of disturbed body function in the course of a high blood-pressure is only an incident, but an important indication of needed protection to threatened tissues. Organic and tissue compensation are maintained by the persistence of the hypertension, and on its being lost, as by a sudden cardiac dilatation, or by too heroic medication, the heart and large blood-vessels are emptied, renal suppression may occur, collapse follow and death is not unlikely to ensue.

NORMAL BLOOD-PRESSURE

In discussing high blood-pressure it is necessary to accept a standard for normal blood-pressure, its range or variation in health, the changes in the various decades and the degree which may

be accepted as abnormal or indicating a probable or real pathology. For practical and accurate results, an accepted technic in the taking of blood-pressure, both systolic and diastolic, the type of instrument used, width of cuff and area of application, relation to meals and exercise, emotional states, etc., should all be noted and reported. Without such observance, a systolic variation of between 10 and 50 mm. Hg, as recorded by different observers or by the same observer at different times may be of no value.

According to Faught,² a good rule in establishing a standard systolic blood-pressure is to consider the normal average of a male, aged 20, to be 120 mm. Hg, and to add one millimeter for every additional two years of life; women having a blood-pressure approximately 10 mm. Hg less than for men of the same age. This would give us a normal blood-pressure of 125 mm. Hg for a man of 30, and 140 mm. Hg for a man of 60 years. A blood-pressure reading of 160 mm. Hg or over is quite invariably indicative of a local or general arterial degeneration, of some pathologic change in the structure of the vessels or of the kidneys, or of an acute toxemia. Osler³ and others believe that a permanent blood-pressure of 150 mm. Hg is seldom found in health. And still the remarkable fact is that so many individuals with arterial hypertension are, according to their time of life, living active, fruitful lives and not infrequently attain to the seventh or eighth decades, dying of some other affection. In fact, arteriosclerosis and high blood-pressure are so common above 50, that many infer them to be natural conditions of advancing years. Historically, the human species, as with other species of animals, seems to have a maximum age limit, and arterial change with associated circulatory phenomena is to be expected if not natural. Metchnikoff,⁴ however, apparently does not believe them to be inevitable or necessary.

* Read in the Medical Section of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting held at St. Louis, May 13-15, 1913.

1. Allbutt: Brit. Med. Jour., Oct. 20, 1906.

2. Faught: Med. Rec., Aug. 10, 1912.

3. Osler: Med. Med., Vol. IV.

4. Metchnikoff: Ann. de l'Inst. Pasteur, September, 1912, xxiv.

CAUSATIVE FACTORS IN NORMAL BLOOD-PRESSURE

It is generally accepted that normal blood-pressure is maintained in the arteries by the ventricular force of the heart, the elastic and contractile power of the arteries and arterioles, and in part by the resistance offered by a large capillary surface. And as emphasized by Osler,⁵ "Osmosis, capillary attraction and cellular activity, as represented in the fermentive and selective cell properties, all play a very important part in sustaining or in varying blood-pressure." However, to all these must be added another, and in the end the controlling factor, that of the vasomotor system, which in health has to do with the regulation and the equal systemic distribution of blood and blood-pressure.

VASOMOTOR CONTROL

The principal centers for the control of the vasomotor system are situated in the medulla oblongata, one in either half, each side of the body being controlled by its own vasomotor center; this latter fact probably at times having to do with the difference in blood-pressure on the two sides of the body. In addition, along the course of the spinal cord, in its various segments, subsidiary centers are located, for the purpose of assisting and also protecting the circulation in case of injury or disease to the medullary or higher spinal vasomotor centers. The vasomotor fibers are carried to the different vascular areas of the body by the sympathetic and anterior spinal nerves.⁶

For some time it has been conjectured that the arterial musculature itself might contain a special and local vasomotor mechanism; and as Adami⁷ has recently pointed out, this is true. Isolated vasomotor cells have been demonstrated in the muscle fibers of the arterial wall, the stimulation of which causes their contraction the same as when under central control. Undoubtedly this fact accounts for many local and probably general circulatory phenomena, being in purpose protective and compensatory.

In health the vasomotor centers are in a state of semi-excitation, the sympathetic or pressor fibers from which tend to keep the arteries and arterioles of the whole body in a state of tonic contraction or tension, thus maintaining normal blood-pressure.

This stimulation or semi-excitation and its control are brought about by certain metabolic products in the blood-supply, influenced directly by the condition and needs of the various tissues and organs of the body. And these needs are dependent on the health and degree of elasticity of the arteries of the particular tissue or organ;

varying also on the presence or absence or the degree of arteriosclerosis. From a standpoint of general organic health it can probably be said that the vessels of the splanchnic area, governing the blood-supply of the abdominal and especially the digestive organs, are the most important part of the circulation under the control of the vasomotor mechanism, for within this large system all digestion and absorption are carried on and assimilation is begun. Hence any disturbance of the vasomotor control of the splanchnics limits their power to supply blood to the digestive organs, thus influencing the nutrition of the whole body. The same can be said of the vasomotor control locally, as in case of the coronary or renal arteries, illustrated especially in angina pectoris.

ASSOCIATED PATHOLOGY

As a rule, there exists throughout the arterial system, in chronic hypertension, a connective tissue change, and not infrequently a true hypertrophy of the muscle fiber. The involvement is usually of the media, with increase in amount and density of the fibrous tissue. The aorta and certain other of the large arteries, as well as the ventricles of the heart, are likely in addition to undergo a true muscular hypertrophy, a proliferation of the fibrous tissue of the intima, and later a calcification; the calcification often being very marked. One case which came to autopsy, as observed by the writer, had a calcification fully $\frac{1}{4}$ inch in thickness extending along the aorta for several inches, down through the valves, and lining a portion of the endocardial ventricular surface. Again, the terminal arteries of the brain or the coronaries may be involved, developing a true endarteritis obliterans.

Such changes, with not infrequent atheromatous foci, developing in the various arteries, with secondary hypertrophy of heart muscle, and abnormal connective tissue growth in kidney substance, give one some idea of what the body tissues have to contend with and how wonderful are their powers of compensation and endurance. Hence, though nothing should be assumed in the individual case, the existence of a high blood-pressure necessitates a careful consideration of its probable relationship to an arteriosclerosis, a nephritis, or a cardiosclerosis.

ETIOLOGY

In considering the pathogenesis and etiology of arterial hypertension a great field of discussion is entered, and many and varied opinions are held. And one hesitates in presenting theories too dogmatically. As brought out by Adami, after accepting the part played by the heart and the influence of the vasomotor centers and mechanisms, we still have to put special stress on the condition of the arterial wall, as to its thickness or pathological condition, in relation

5. Osler: *Brit. Med. Jour.*, Nov. 2, 1912.

6. Landois: *Phys.*, 1904.

7. Adami: *Prin. Path.*, Vol. II.

to the force of the contained blood and the pressure therein produced by pressor elements. And it is in the end this relationship of resistance of arterial wall to the coursing blood which gives us a normal, a low, or a high blood-pressure. In other words, normal blood-pressure and high blood-pressure are the resultant of the action of certain normal or excessive pressor substances on a responsive arterial wall, and its vasomotor system.

To say in specific cases that physical labor, alcohol, syphilis, tobacco, the intestinal toxemias, the great stress of modern life with its increased mental activity and worry, are the causes of diseased arteries and high blood-pressure is not to satisfy or account for the etiology. For with any or several of these factors in a large number of examined individuals, a great proportion show no evidence of gross arterial disease, or high blood-pressure, nor do their tissues produce pressor substances.

Osler⁸ states his disbelief in alcohol as the sole cause of any case of arteriosclerosis, adding that Lancereaux and R. A. Cabot reject the hypothesis absolutely.

Of tobacco, Osler and French⁹ hold the same opinion, stating that while experimentally it is possible to produce the most marked degenerative changes in the aorta of lower animals by nicotine, its constant, common use seems to have no influence on the vascular system of man. Personal observation in my practice in the middle-aged now smoking excessively, and in the old having had this as a sole controlling habit, no influence, general in its application, on blood-pressure is observed, nor arteriosclerosis demonstrated.

Syphilis, in addition to its specifically produced gummata and lesions of the brain and other tissues, is often associated with sclerosis and atheroma of the blood-vessels, but the proof is not conclusive that the spirochetes, or their toxins, are the primary or essential factor in producing the general arterial change and hypertension. And against this is the fact that while the specific tumor or lesion disappears under treatment, the arteriosclerosis and high blood-pressure persist. Three cases of tertiary syphilis now under my observation and treatment, and about twenty years removed from the date of initial infection, maintain constantly, with or without medication, a low blood-pressure and show no signs of arteriosclerosis. Other luetic cases with general arteriosclerosis suffering with focal lesions, improve as to symptoms under specific treatment, but the arteriosclerosis and high blood-pressure undergo no change.

Thayer¹⁰ in the examination of some 4,000 consecutive case reports at Johns Hopkins Hospital, states that he found but twelve under 50

years of age who gave a history of having had only syphilis, and but two of them had palpable radials, indicating arteriosclerosis.

Especially irrational is it to speak of high blood-pressure and diseased arteries as phenomena peculiar to modern life; peculiar to a class, as physicians, or even to the aged. None of these contentions hold true on investigation. M. A. Ruffer,¹¹ who had the rare opportunity of examining grossly and microscopically the tissues and organs of several Egyptian, Greek and Coptic mummies, dating from 1520 B. C. to 525 A. D., has clearly demonstrated the common occurrence among them of calcareous, atheromatous and fibrous arteries. And as he adds, "they were not of a people living under any great physical or mental strain; addicted to use of alcohol, or of a class among whom syphilis was common."

A recent inquiry into the arterial tension of several of our most active Kansas City physicians, and some of them high strung and nervous, reveals a systolic blood-pressure ranging from 104 to 140 mm. Hg.

A very suggestive investigation made by Fremont Smith¹² on the autopsies of 300 children showed eighty to have had arteriosclerosis in various stages. Of these, several premature non-luetic fetuses were found to have sclerosed and atheromatous arteries; one whose mother, during pregnancy, had an acute inflammatory rheumatism. Fischer¹³ reports a boy of 16, dead of uremia, with general arteriosclerosis and cardiac hypertrophy. Such is rather strong evidence against degenerative arteries being limited to or consequent on old age.

Under "primary causes" of arterial hypertension, one is impressed with the prominent part "heredity" apparently plays in often transmitting through several generations this tendency to arterial degeneration and hypertension. Both physiologists and pathologists recognize the peculiar structural and functional vulnerability of the vascular system in succeeding generations. Adami speaks of the "congenitally weak arterial wall" as a main cause of arteriosclerosis. Undoubtedly there is just as much basis for the theory of a hereditary tendency to arterial degenerative and proliferative change, with associated symptomatology, as there is in hemophilia or gout. And in attributing primary and contributory causes this should always be borne in mind.

Rudolf¹⁴ mentions a series of three generations in which one, a clergyman, died at 63 of slow cerebral thrombosis; his grandfather at 70, of apoplexy, and his father at 67, probably of a similar condition. I now have under observation a patient 49 years of age, with a stationary blood-pressure of 170 mm. Hg (at times 220 mm. Hg),

8. Osler: *Mod. Med.*, Vol. IV.

9. French: *Lancet*, July 13, 1912.

10. Thayer: *J. A. M. A.*, Sept. 10, 1910.

11. Ruffer: *Jour. Path. and Bacteriol.*, April 11.

12. Fremont Smith: *A. J. M. S.*, Feb. 19, 1908.

13. Fischer: *Nephritis*.

14. Rudolf: *A. J. M. S.*, September, 1908.

whose father died at 70 of apoplexy; mother at same age, of cerebral thrombus; a paternal uncle and aunt of apoplexy; an uncle of cancer, and the grandfather of apoplexy—all of these living to be between 60 and 72 years of age. In the immediate generation were two brothers deaf in the thirties, and two neurotic sisters. In this family there is no history of tuberculosis, alcoholism, syphilis, severe acute infections or known disturbance of internal or renal secretions, save inflammatory rheumatism and erysipelas in one individual. A case (age 40) recently came to autopsy at the Kansas City General Hospital, with general arteriosclerosis and involvement of the heart and kidneys, whose history reveals that his parents both died of paralysis, a brother of dropsy, a nephew of cancer and two daughters in infancy.

On careful investigation such histories are not uncommon and point to a tendency to transmission of qualities of sensitiveness of tissue, or disturbed metabolism of ancestral origin, which must in all probability be prime factors in producing arterial change and hypertension.

As to other causes which have great basis of claim, especially as to their being the precipitating or immediate factor in the developing of sclerosis and its chain of symptoms, first in importance should be placed the "products of bacteria." As cited by Adami,¹⁵ Romberg and his pupils, in quite conclusive experiments and observation, lay greatest stress on the influence of bacterial toxins on the medullary vasomotor centers, in producing arterial hypertension; while Rogers and others have shown the effects of the products of bacteria on the heart and arterial walls.

Wiesl, as quoted by Osler,¹⁶ found in 300 cases, dead of acute infections, eighty to have had arteriosclerosis with involvement of the media. Thayer, from his series of 4,000 cases demonstrates the probable sequence of arterial degeneration to rheumatic and typhoid infections. Of those having had rheumatism as a sole possible factor, 34.6 per cent. had palpable radials; while those having had only typhoid, 26.3 per cent. showed evidence of arteriosclerosis.¹⁷

Scarlet fever with its not infrequent involvement of the kidneys often develops arteriosclerosis and nephritis, and associated increase in arterial pressure. At present I have under observation a lad 13 years of age, about four months convalesced from a mild attack of scarlet fever, who runs a rather constant albuminuria and a blood-pressure up to 120 mm. Hg. His low and probably normal blood-pressure being 90 mm. Hg. Some years ago I reported an acute uremia with high blood-pressure, cardiac involvement, convulsions, renal suppression, coma, with

recovery following venesection; this a sequel to scarlet fever in a boy of 8 years.¹⁸ The patient, now 11 years old, has a blood-pressure of 124 mm. Hg (March 15, 1913).

Metchnikoff's experiments lead him to believe that the toxins of certain intestinal bacteria play an important part in the pathogenesis of arteriosclerosis and hypertension. Others lay stress on the common putrefactive products of the lower bowel, such as indol, skatol, etc. This latter opinion, however, has no basis of fact, for such substances are not pressor in their action.

Clinical observation in disease of, and experimentation on, certain organs with internal secretions, such as the kidneys, adrenals and pancreas, yield very positive evidence as to the part they may play in producing high blood-pressure and associated or subsequent arterial change. It is probable that these structures are not infrequently over-stimulated and secrete, in excess, substances having pressor qualities producing a hypertension; or by disease and reduction of their organic tissue permit the retention of poisons in the system, which likewise may produce hypertension and degeneration. Such is Janeway's conclusion¹⁹ after extensive experiments and observations into the causal relation of kidney disease and hypertension. Swedish workers²⁰ have recently demonstrated, in case of the kidneys, pressor substances having the power of over-stimulating the vasomotor centers, first producing a hypertension, then cardiac hypertrophy and arteriosclerosis.

The experiments of Joseph Miller²¹ and others on rabbits point conclusively to the pressor quality of adrenalin, a hypertension being developed in every instance with associated arteriosclerosis when the injections are repeated over long periods. However, it is of interest to note that when Miller was able to keep the blood-pressure reduced by associated amyl nitrite inhalations, the adrenalin injections then failed to produce an arteriosclerosis, leading him to infer that it is the maintenance of the high blood-pressure and not the local or toxic action of the adrenalin which produces the arterial change. It is probable that such is true with many chemical stimuli and other pressor factors acting indirectly on the arteries through the vasomotor system.

In diabetes, in which marked chemical or metabolic disturbance exists with the usual disease of the pancreas, hypertension develops in adults late in the disease. Janeway²² reports out of 220 of his own observed cases of diabetes, 50 to have developed a high blood-pressure toward the end. In one of my own cases a rise from a stationary blood-pressure of 104 to 150 mm. Hg

15. Adami: *Prin. Path.*, Vol. XI.

16. Osler: *Mod. Med.*, Vol. IV.

17. Thayer: *J. A. M. A.*, Sept. 10, 1910.

18. Child: *J. A. M. A.*, Dec. 11, 1909.

19. Janeway: *A. J. M. S.*, May, 1913.

20. Shaw: *Brit. Med. Jour.*, Dec. 3, 1912.

21. Miller: *A. J. M. S.*, April, 1907.

22. Janeway: *A. J. M. S.*, Dec. 14, 1912.

was observed in the patient's last illness, ending in diabetic coma; the diabetes existing for at least three years.

Certain exogenous poisons when introduced have the property of acting as pressor and degeneration stimuli to the arterial system. Lead, perhaps, is the best example, illustrated among painters and workers in lead, who so commonly develop high blood-pressure and arterial disease. A young woman, 26 years of age, in the Kansas City General Hospital, suffering from chronic lead poisoning, partial paralysis with palpable radials, maintains a blood-pressure of 160 mm. Hg.

TREATMENT

Accepting that the average case of high blood-pressure is of a chronic and progressive nature, and that arterial degenerative or proliferative change is *pari passu* a constant complication or sequel, and compensatory, the treatment of arterial hypertension is not one for specific or curative therapy. Above all it should be emphasized that on the discovery of a high blood-pressure, its reduction is not the indication to meet.

In considering the particular measures or treatment to institute, the individual patient, his own and his family history, his susceptibility to infection, his habits of diet, exercise, etc., should be investigated. If the patient is subject to cerebral attacks, or splanchnic angio-spasm, cardiac disturbance, or uremic symptoms, stress should be put on those things which will relieve tension on the particular organ or tissue. Regularity and moderation in eating and drinking should be urged, and moderate, systematic exercise should be insisted on, with diversion sufficient in the daily duties to assist in equalizing the systemic arterial tension. If a patient has for years been smoking two to six cigars a day, or has been addicted in moderation to alcohol, there is no indication, so far as the known toxic or pressor influence of these substances is concerned, why the patient should be urged to change his habit. If a patient suffering with a local or a cardiac sclerosis be a banker or a business man of sedentary habits and long hours, with practically no exercise, proper massage with manipulation and the assumption of directed, muscular, resistant exercises are undoubtedly indicated. And with such measures resorted to, with periodic change in travel and scene, and sensible attention to diet and the emunctories, there is no reason why the individual should not continue his regular business up to broken compensation. But diversion and systematic moderate exercise should be insisted on in most chronic cases.

The housewife, club or church woman whose years of habit have confirmed her in organic and tissue tendencies, should not, in case a high blood-pressure is discovered, be urged to change her

life, save to point of moderation. Nor should she be put to bed, or have the nitrites or iodids routinely prescribed for her. Her organic and arterial condition, no matter how advanced in sclerosis, is a matter of years' standing, though not previously recognized; and general activity, after a very short interval of guarded and directed rest, is what will more readily establish a circulatory equilibrium and systemic compensation.

To illustrate, permit me to present a few case records:

CASE 1. A woman now under observation, house-keeper, 73 years of age, active daily, for long hours; with deafness, general arteriosclerosis, cardiac hypertrophy and a persistent hypertension of 190 mm. Hg. having occasional mild cerebral attacks of dizziness and disturbed vision, has her vasomotor compensation maintained by regular though moderate muscular exercise in home duties, and on a regular diet. Her general functions are active and she has never been on specific or protracted medication for her arterial condition.

CASE 2.—A woman, age about 50; has been throughout girlhood, young womanhood and to-day is very active in intellectual and outdoor interests, having constant, sustained mental activity, and constant though not violent physical exercise. She has a permanent blood-pressure of 170 mm. Hg. Several years ago she had frequent cerebral attacks, probably cerebro-angio-spasm, with severe headache, vertigo, blindness, disturbed sensations in extremities, difficulty in speech and temporary mental confusion. A recent similar attack was accompanied by a hypertension of 220 mm. Hg. Diet, saline laxatives, and rest from work and outside duties for a few days restored her to her normal condition, with a blood-pressure sustained at 170 mm. Hg. Only occasionally slight renal insufficiency exists.

CASE 3.—A woman, dying recently at 76, of carcinoma of the body of the uterus, was for some four years under observation. She represented one of the extreme cases of general arterial degeneration with the establishment of a compensation which was phenomenal. From the earliest observation up to the day she died from cancer intoxication she maintained a blood-pressure of from 180 to 220 mm. Hg. and from her history undoubtedly had for years. She had a cardiac hypertrophy with both mitral and aortic lesions, a nephritis, and clinically a marked sclerosis of the uterine and abdominal vessels. The first attendance on her was during a severe attack of pulmonary edema, from which she recovered within a surprisingly short time. At intervals she would suffer from severe headache, disturbed vision and vertigo, and at other times very severe dyspnea and excessive edema of the extremities. But the changes from these attacks, with yielding clinical signs, was the remarkable thing. When the edema became excessive, the attacks of pain aggravated, or an apparent splanchnic spasm was at its height, then a severe uterine hemorrhage would occur, or a profuse diarrhea, or increased urinary secretion; and her aggravated, subjective and objective signs were much relieved, though slight if any change in height of blood-pressure. In fact, a second day's reading not infrequently was 20 mm. higher, showing arterial reinforcement and equilization.

CASE 4.—A male, white, patient at the General Hospital, 50 years of age, with an etiologic factor of articular rheumatism, and with an attack of nephritis of six months' standing, entered with a blood-pressure of 210 mm. Hg, complaining of severe headaches, probably uremic, and dropsy. Diaphoresis, diuresis, mercurial and saline purgation, semiliquid diet and rest, with various symptomatic drugs, were resorted to. A gradual reduction of the blood-pressure to 160 mm. Hg, took place within two weeks with improvement in the renal sufficiency. For two weeks more during the remainder of the patient's stay this blood-pressure was maintained. The nitrites were used in this case with an observed immediate but not sustained reduction of blood pressure, and without influence on the headaches. With rest and increased renal activity the patient improved clinically and left at the expiration of four weeks improved, and with a blood-pressure reduction of 50 mm. Hg.

Such illustrative cases demonstrate the lack of indication to resort to specific medication in most cases of arterial hypertension. In the average case rest for a short time, with judicious stimulation of the emunctories, thus relieving the large splanchnic area and equalizing the cerebral and general circulation, will tend to relieve and thus prepare Nature to do its own regulation.

In the acute accident, as an angina pectoris, a single dose of amyl nitrite or nitroglycerin may relax the spasm or bring about collateral circulation and guard the involved artery and the heart.

A large cerebral clot of sudden origin and with excessive blood-pressure may in good hands be removed, and the tension relieved. In an acute uremia following scarlet fever or puerperal eclampsia with hypertension, a venesection, a rapidly induced labor with its hemorrhage, is rational treatment, for here you have an acute intoxication as the cause which the loss of blood removes. The earlier the treatment the better.

In chronic interstitial nephritis and its probable associated myocardial insufficiency, a uremia not infrequently occurs with its chain of circulatory and nervous symptoms, and usually a rise in an already high blood-pressure. The relief of engorged and toxemic tissues is to be sought by diuresis, diaphoresis and catharsis, and perhaps a venesection, and protection to the already overtaxed heart. In addition to hot packs and salines an active digitalis is indicated. If the case be not too advanced, a favorable issue may result, but the prognosis should always be guarded.

In case a sudden failure of a sclerosed and hypertrophied heart occur, with fall of blood-pressure, there is indication for stimulation, and digitalis is the drug par excellence. Even though the tension be raised to above the original hypertension, such medication is indicated and in many cases is the one means of reestablishing compensation.

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THE DIAGNOSIS AND POSTOPERATIVE CONDUCT OF ACUTE SURGICAL CONDITIONS *

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The selection of this extensive subject by no means implies an intention to exhaust it. In a paper thus necessarily abridged, one can but skirmish along the border-line with an occasional emphasis of facts that are too often ignored, neglected or misapplied.

That many of to-day's accepted theories and modes of treatment will in some future time be discarded, does not deter us from standing on the knowledge of to-day. We must apply in our work the principles that at present serve us, until less pregnable ones are presented.

The intention, therefore, in this paper is to call attention to some of the most generally accepted methods of handling acute surgical conditions with such modifications or additions as personal experience may suggest. It will be impossible to include all acute surgical conditions, and all reference to the operative technic will be omitted.

By far the most important part of the conduct of a case is the establishment of a correct diagnosis.

Head.—In acute head injuries the life of the patient often depends on a correct interpretation of the symptoms. It is not always an evidence of conservatism to delay operative procedure as long as the patient is evidently "doing well." Nor is there any word of commendation for the surgeon whose anxiety to operate clouds his judgment and effaces the interests of the patient. We must approach each cranial trauma with care and patience. However trivial the injury may at first appear, frequent examinations should be made for the purpose of noting any progression.

The danger is not that direct injury to brain tissue has been done, for the brain can withstand considerable trauma and laceration as long as pressure, that stifler of its vitality, is withheld. Pressure may be due either to direct impaction of bone, a foreign body or to hemorrhage. If to either of the former, the symptoms, depending on the area and extent of involvement, will remain stationary. If due to hemorrhage, the progress of symptoms will keep pace with the growing imbecification. This will then serve as a guide to the surgeon and should dictate his action. All other things being considered, all depressions of the vault should be elevated for the following reasons: If the outer table alone is involved, no

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harm can follow the manipulation; if a bony projection has pierced the dura, the procedure is imperative. A depression presenting a smooth interior surface has the same effect on brain tissue as a hematoma, with the disadvantage of being non-absorbable, and continued pressure destroys. We do not await symptoms to determine whether an abdominal wound has entered the peritoneal cavity, nor should we await pupillary changes, stertorous respiration and paralysis to guide us in cranial depressions. Knowing as we do that the smallest hematoma may conceal a fracture of the vault; that a simple linear fracture may extend into the base; that the outer table may be intact and the inner table splintered, displaced and perforating; that the site of the trauma may be negative and a severe fracture and brain injury exist at the opposite pole; that concussion more often means confusion and laceration; that compression means danger, immediate or remote; that intracranial hemorrhage from extracranial trauma is a most dangerous and alarming condition and is distinctly amenable to surgical treatment, when the base is not involved, it seems not an error in judgment to advance the following axioms to be followed in diagnosing acute cranial injury:

1. All hematomas of the scalp should be explored.
2. All linear fractures should be traced to the base or their termination.
3. All depressions should be elevated.
4. Progressive intracranial hemorrhage demands surgical control.
5. Shock will continue with hemorrhage just as surely in cerebral cases as in ruptured ectopic, and should be combated by interference and not by blood-pressure raising procedures and procrastination.

Chest.—The two classes of acute chest trauma that interest us are due (a) rib fracture, and (b) knife or gunshot perforating wounds of the pleural cavity. Acute lancinating pains, aggravated by deep respiration, the pains always radiating from the same area, with or without crepitus, indicate a fracture. Gunshot or knife penetrating wounds are diagnosed without difficulty and treated expectantly and symptomatically. Complete rest, aided by morphia, and adhesive fixation will within a short time, determine the extent of injury. Hemorrhage from a chest wound should be controlled if possible, by packing with gauze and firm fixation of the chest wall. This will control bleeding from the superficial vessels and hemorrhage from a perforated lung, unless a large vessel has been injured, stops spontaneously, the more rapidly when sufficient air has been admitted to the pleural cavity to produce partial or total collapse of the organ.

Abdomen.—We will briefly consider important diagnostic points of each of the following:

1. Perforating wounds.
2. Severe trauma (non-perforating).
3. Peritonitis.
4. Acute appendicitis.
5. Acute cholecystitis.
6. Renal colic.
7. Perforated ulcer of the stomach or duodenum.
8. Typhoid perforation.
9. Mesenteric thrombosis.
10. Ruptured ectopic pregnancy.
11. Strangulated hernia.
12. Intestinal obstruction.

1. The symptoms of a perforating wound may vary from a state of collapse to entire ignorance of the existence of an injury. The absence of all clinical symptoms of visceral damage may often mislead, for one will frequently find on exploring such cases, a perforated intestine or a concealed hemorrhage from an injured viscus or mesentery. All abdominal wounds should, therefore, be thoroughly explored, not with a probe or finger, but by a careful dissection of the track to its terminus. If the peritoneal cavity has been entered, a thorough exploration is imperative.

2. Severe abdominal trauma, such as a kick or heavy fall on a blunt object, may inflict so severe an injury as a ruptured intestine, bladder, spleen or liver. Pain, nausea and vomiting, symptoms of shock and collapse with beginning rigidity of the muscle wall are clear indications of internal injury and should be explored without waiting for clinical signs of internal hemorrhage and peritonitis.

3. Peritonitis can be dismissed with but a few words, for all are familiar with the well-known symptoms: pain, nausea or vomiting, muscular rigidity, distention from intestinal paresis, toxemia, shock and collapse. As it constitutes so largely the clinical symptoms of the acute infectious processes to be discussed, it will need no further consideration here.

4. Acute appendicitis. I desire to mention only a factor in the diagnosis. By our past mistakes, we have been taught that all acute right inguinal pain is not necessarily appendicitis and that all cases of so-called appendicitis are not relieved by simple amputation. Ureteral stone on the pelvic brim, diverticulitis, Lane's kink, the various forms of Jackson's membrane, chronic intestinal stasis with prolapsed cecum, acute cholecystitis and duodenal ulcer have been and are to-day diagnosed and operated as appendicitis, for the intricate and intimately connected network of sympathetic nerves that control the abdominal mechanism are so inseparably blended that only one who has curbed his first impres-

sions and taught himself to observe and analyze with care, can intelligently interpret their message.

The fact that there are so many other conditions that can confuse a diagnosis of appendicitis, does not excuse a failure to recognize it. Every case of acute appendicitis that reaches a stage of pus formation and abscess is a discredit to the attending physician, provided he has had the cooperation of the patient and a fair opportunity to observe its progress. When a patient is attacked with abrupt acute abdominal pain, diffusely distributed for the first few hours, then localizing over the lower quadrant, usually the right, nausea or vomiting, muscular rigidity, acute sensitiveness over the involved region, a diagnosis of appendicitis is justified. Identically the same symptoms were observed recently in three cases which proved on operation to be a Meckel's diverticulum, undergoing the same process, but the indications in any case presenting these symptoms are for immediate interference, for in acute surgery, we are not always justified in withholding exploration until a definite diagnosis has been made. At a certain stage of the attack, the pulse and temperature may be normal; the leukocyte count is variable and unreliable and the clinical symptoms mentioned above are all sufficient.

5. Acute cholecystitis is most often confused with acute appendicitis and duodenal ulcer. The high post cecal appendix, the exacerbated duodenal ulcer and an acute infection of the gall-bladder may closely resemble each other. The diagnosis can be made only by careful elimination, and must sometimes be decided by a right resectus exploration.

6. A small renal calculus lodged on the brim of the pelvis may be mistaken within the first few hours for an acute appendix. It is well to bear in mind that pains radiating from the kidney to the testicle, and red blood-cells in the urine may be caused by an acutely exacerbated chronic appendix that is clamped over the ureter at the pelvic brim. The temperature and pulse in all these conditions are so variable that little reliance can be placed on them, when other clinical symptoms refute their record.

7. A perforated ulcer of the duodenum or stomach must be diagnosed by the history of longstanding indigestion ending in an acute epigastric pain with symptoms of collapse and a rapidly developing peritonitis.

8. Typhoid perforations are not difficult to diagnose, when a patient is under careful observation. Acute abdominal pain is so rare in typhoid that its appearance must always create extreme watchfulness. If attended by a rise of temperature and pulse, and any degree of rigidity, a perforation has occurred, and should be

subjected to identically the same treatment given an intestine ruptured from any other cause.

9. An embolism or thrombosis in a mesenteric artery is characterized by agonizing pain, rapid appearance of shock, collapse and frequently the clinical symptoms of internal hemorrhage. (The author has observed two cases in which, within five hours, the amount of blood poured into the intestine and peritoneal cavity amounted to more than two quarts.)

10. The important signs of a ruptured ectopic pregnancy are: Acute pain in the pelvis, occurring usually during muscular activity, rigidity of lower abdomen, rapidly increasing pulse, slight temperature and nausea due to the soiling of the peritoneum, and the presence of a tender mass in the culdesac or pelvic fossae. It is a fortunate truth that many ectopics which rupture early are cared for by local inflammatory reaction and absorption. It is also true that many cases of acute appendicitis would be cared for by Nature, but the fact that in every such case there lies a possibility, and according to statistics, a strong probability of unfavorable outcome, and that no one is competent to judge in advance the progress of any case upholds the contention of the modern surgeon, that there is no clearer indication for immediate operation than the presence of a bleeding vessel within the abdominal cavity.

11. The diagnosis of a strangulated hernia is so simple that it is usually made by the patient. The only observation on this condition that I care to make is this: A strangulated hernia, even of a few hours' duration that has resisted the patient's repeated efforts to reduce, has had sufficient trauma and its forcible reduction or prolonged attempts to reduce by the medical attendant are both unwise and unsurgical.

12. There is no intra-abdominal accident more feared and respected by the surgeon than acute intestinal obstruction. The intensely disappointing results in the most promising case, and the unexpected recovery of the apparently hopeless one, are features with which every operator is familiar, and most discouraging it is to our prognostic pride. Although we are slowly nearing the solution, we still lack an accurate knowledge of the cause of death; we are justly proud of those that recover until the next similar case results in failure. This juggernaut will be overcome only when we have become more skilled in the early diagnosis of bowel block; the secret of our progress in all acute surgery lies more in our ability to reach an early diagnosis and institute the indicated treatment, than in the many modern modifications of the technique of the old masters. Our first duty in a case of obstruction is to determine the cause, whether it be spastic, paralytic or mechanical. If we fail to discover this, we are fighting in the dark and erecting obstructions to our own advance. We should

take an accurate history, which in itself is a much neglected art: ascertain the amount, location and quality of peristalsis; the presence of any tender area or tumor; the condition of the pulse and temperature and the nature of the pain, if present; the lower bowel should be treated to several copious enemata and all of this before any attempt has been made to stimulate the action of the bowels by mouth medication. How often do we receive cases of acute mechanical obstruction to whom has been administered every cathartic in the calendar, in the desperate hope that they may push their way through the obstruction. We must awaken to the fact that a mechanical obstruction must be relieved from below, or at the point of obstruction, and that for every stimulation of the peristaltic wave promoted by irritating chemical, we are contributing an equivalent to the shock of the sufferer and inviting disaster in the form of post-operative paresis. I am also of the opinion that a fair percentage of the shock attending obstruction, is produced by our dilatory preoperative tactics, delaying operation until the entire small bowel is enormously distended and the sensitive nerve filaments of the mesentery insulted for hours by the stretching incident to this distention.

Morphin should never be given until a diagnosis has been made. When that has been done and the proper course decided on, then the intelligent use of it may be permissible. It is a valuable drug, and when properly used is indispensable, but I firmly believe that it has been the indirect cause of more deaths, from acute surgical conditions than any other factor. It operates by soothing not only the pain of the sufferer, but the worry of the attending physician, and stifles the cry of Nature until clinical symptoms which even the family can interpret, have appeared, and the unfortunate is hurried to the operating table, a bad risk, born of a good risk, with morphin the accoucheur.

The necessity of an early diagnosis needs no accentuation. To arrive at one in many acute cases, we are often required to perform minor, and on rare occasions, major operations. The frequency with which members of the profession confuse the terms diagnosis and treatment has caused many serious mistakes and unnecessary delays, for in all cases of the traumatic type, the diagnostic steps are prone to merge so gradually into the treatment, that there is no definite dividing line. This should be entirely acceptable to the surgeon, for except in cases of extreme emergency, such as hemorrhage, profound shock or collapse, the attendant who traces a bullet through the abdominal wall, or who elevates a cranial depression, should be competent to recognize and treat surgically any condition which presents itself.

Preparation.—In the preparation of the patient for operation for an acute condition, we must consider primarily, the urgency of the case, the state of shock, presence of hemorrhage or rapidly progressing infection, and secondarily, the condition of the stomach, bowels, kidney, heart, blood-pressure, etc. In cases of acute severe cranial, chest or abdominal injury, the attendant is not justified in awaiting the effect of a stimulated physiological process for preoperative elimination, but must be content with a lavage and enema, and both may in many cases be omitted.

When the condition is less urgent, then the proper degree of elimination may be safely encouraged, and the vital functions properly coached to withstand the ordeal. When the case is of such urgency by reason of hemorrhage, intestinal or visceral injury, as in perforating appendix, duodenal ulcer and typhoid perforation, that delay will permit soiling of the peritoneum or cause rapid loss of vitality from hemorrhage, all preparation, except of the field of operation, had better be abandoned. But in acute abdominal non-traumatic conditions, such as appendicitis, acute obstruction, etc., the patient's chances are improved by a more careful preparation. A thoughtful physician would refrain, of course, from giving cathartics and drugs that promote peristalsis in acute obstruction, appendicitis, peritonitis, threatened or actual duodenal or stomach perforation or in attempting any other elimination than can be safely accomplished by lavage, enemata and evacuation of the bladder. One must assume in presenting suggestions on so broad and flexible a subject, that the attending physician is at least conversant with the text-book teachings of his cases, aside from the practical experience he has gained, and for that reason, I am not attempting to tabulate explicit instructions that can be followed in each individual case, but instead, an accentuation of more or less important observations.

The lack of common sense and surgical judgment sometimes exhibited is indeed deplorable. I have seen cases of traumatic rupture of the intestine and bladder "prepared" by washing out the bladder and repeated enemata given; I have seen operation for an acute rapidly progressing peritonitis delayed for thirty-six or more hours because the doctor was determined to obtain a bowel movement by oil and enema before submitting to the "danger" of an operation; and many other equally absurd and thoughtless methods of preparation. It is clearly evident that no routine method can be suggested, but that each case must be individualized by the surgeon and subjected to that preparatory method which will insure to the patient the maximum chance of prompt relief and ultimate recovery.

Anesthetic.—The choice of the anesthetic will depend on the nature and severity of the injury or disease. Many of the old theoretical and empir-

ical bugaboos which have for so many decades been blindly followed have been dissolved in the midst of experimental medicine, and replaced by the belief that the safety of an anesthetic lies more in the hands of the anesthetist than in its chemical constituents. For example, I would sooner trust the average anesthetist to administer chloroform than nitrous oxid, the statistical standing of which is much lower, in risk. In the reputable clinics of our country and Europe, one sees the administration of their adopted anesthetic brought to a comparative degree of perfection, and whether it be ether, nitrous oxid, chloroform or any combination of them with oxygen, we are misguidedly impressed by the safety of the drug instead of by the safety insured by the skilled administrator. In the absence, therefore, of definite disease of the respiratory, circulatory and eliminatory organs, which preclude the use of certain anesthetics because of their definitely known antagonism, the anesthetist, who will be guided by his training, should make the selection. In acute surgery, the use of local anesthesia is a most neglected art. The discovery of cocaine derivatives which in various combinations are so comparatively harmless that extensive areas can be obtunded, has opened a field that is deserving of careful cultivation. Abdominal explorations can be made with ease, even during a state of shock; amputations performed by nerve blocking, and in severe cases where the manipulations demand a general narcosis, the anoci-association type of "shock absorber" as expounded by Crile, is a valuable asset.

Postoperative.—It may be permissible in passing from the anesthetic to the postoperative stage to emphasize these points: The postoperative conduct of a case is determined on the operating table, and in the preoperative stage; the necessity of combating shock, hemorrhage, vomiting and pain will vary with the proportionate skill and knowledge of the surgeon. He who recognizes the value of a careful personal study of the case in hand, who exercises common sense in matters of preparation, and selection of time for action, and whose knowledge of anatomy and physiological functions enable him to eliminate unnecessary trauma and to manipulate with gentleness the organs and viscera, restore as near as possible the normal relations of each, and who can work with directness, without unnecessary haste, with careful technic and surgical toilet, will be awarded by a minimum of postoperative worries.

Position (cranium).—In cranial cases until shock has disappeared, the patient should be horizontal. If the operation has been for hemorrhage or decompression, without external drainage of the ventricular contents, the intracranial pressure is reduced by the head-raised position, guarding always against cerebral anemia, which may prove rapidly fatal. The head of the bed

should, therefore, be slowly and gradually elevated under close observation.

Thorax.—In acute thoracic surgery it is usually necessary to limit the expansion of one side and promote drainage. This is best accomplished by placing the patient on the affected side (a position he will naturally assume) to favor free expansion and compensatory action of the sound side and gravitation of drainage.

Abdomen.—The position to be applied in abdominal postoperative cases must have as its object, circulatory equilibrium, remedy or prevention of cerebral anemia and shock, the promotion of drainage or the prevention of spread of infection by gravitation. Occasions arise where severe shock follows the operation of a septic case in which the head-high position is indicated. The surgeon will select as a rule the compromise position, favoring the one that will influence the vitality of the patient and keep active the vital functions, as against the possible danger of increasing the infected area. In most cases the horizontal position is to be favored, because the dependent areas in the abdominal cavity are the pelvic, cecal and nephritic fossae, and lowering the infected area by raising on a pillow the sound side will give general satisfaction and will obviate the danger of overtaxing a weakened heart or embarrassing the cerebral circulation, which sometimes attend the upright or Fowler's position.

Salines.—In this, we have a much abused and perhaps overestimated remedy. Too frequently, after the nervous system and heart have been all but devitalized by long-continued operative trauma and narcosis, the circulation is hurriedly overcharged with salt solution and the failing heart is unable to accept the burden and acute dilatation ensues. It is essential above all else to know the cause of a condition before we can safely apply the remedy. We know that except when loss of blood has been severe and rapid, the blood-stream is replenished from the tissue fluids, and that when sudden and severe hemorrhage precludes this equalization, then outside assistance is needed and the careful and slow transfusion is a valuable aid. Yet too often the circulatory failure is due to interference with the blood-pressure through reflex irritation of the vasomotor system and not to a loss of fluids, and when such is the case it is as disastrous to empty additional fluid into the blood-stream as it would be to remove the cylinder head of a locomotive on an upgrade pull, play water over the fire, and couple on additional cars.

Proctoclysis is indicated in most abdominal operations of a severe type when there is present an infection, hemorrhage and shock, and to reduce thirst, but naturally is to be omitted when low intestinal continuity has been interfered with, except when gaseous distension is present.

Nausea and Vomiting.—A varied amount of this most unpleasant of postoperative sequelae is to be expected until we can discover less irritating anesthetics and abolish the reflexes. The nearest approach we have to a remedy is realized by preoperative elimination, where permissible, and the removal of the stomach contents by lavage on the table as soon as the swallowing reflex returns. I have had imaginary and real help from this procedure and usually pass into the stomach two or three ounces of olive oil. Less nausea and vomiting follow nitrous oxid anesthesia than any other anesthetic. It must be borne in mind that postoperative vomiting, persisting over twenty-four to thirty-six hours may be due to many more serious things than reflex and direct irritation, such as ileus, acute dilatation, acidosis and nephritic involvement, and the energies applied toward local and internal medication to control it must be directed by an observing eye and a reasoning mind. If retching is severe during the first twenty-four hours, a generous drink of hot water with soda bicarbonate will contribute to the comfort of the patient and hasten the time when liquids can be retained and thirst alleviated.

Pain.—Pain promotes shock and lowers vitality. Simple means will lessen or abolish it at times, especially when due to distension of the bowel or stomach, and I have never yet had occasion to regret the use of a lavage or a glycerin, alum or saline enema, on the advent of severe abdominal pain.

The pain incident to injury inflicted by the incision or operative trauma is the type that justifies mild soothing measures. As a rule, the postoperative cases which can be conducted without medication, recover most rapidly and satisfactorily. The use of morphin, except when definitely indicated, is to be deplored, for it retards the resumption of normal physiological activity, interferes with elimination and invites dangerous postoperative sequelae. Change of position, local heat and enemata or lavage are far less dangerous, and in the end more efficacious. When sleeplessness is persistent, not due to a complication, it is sometimes necessary to produce it artificially by a dose sufficiently large to accomplish the purpose.

Complications.—

1. Hemorrhage.
2. Shock and collapse.
3. Infection.
4. Postoperative ileus.

- (a) Spastic.
- (b) Paralytic.
- (c) Mechanical.

5. Heart, lung, stomach, kidney and circulatory.

Time will not permit a review of the symptoms of these complications; therefore, this paper will approach them only to call attention to a few important factors to be observed in dealing with them when they arise.

If there is any one law in the practice of surgery that will admit of no discussion, it is that hemorrhage must be controlled whenever it occurs. As in most complications, it should be treated before it occurs, by careful and complete technic, but cases occur in the practice of every surgeon, and when it is clearly evident and accurately diagnosed there is no condition that less condones procrastination.

Shock and Collapse.—The chief danger in combating shock is overstimulation. It is not uncommon in cases exhibiting symptoms of acute collapse to see four or five hypodermics administered in rapid succession and when the sluggish blood current has gathered them all up and distributed them to the centers, the reaction is too severe and the result often unpleasant, if not disastrous. In acute severe shock, not induced by hemorrhage, the sheet anchors are adrenalin and camphorated oil. External heat, position, stimulation of respiration by mild and rhythmic rectal dilatation, will serve to bridge the halting mechanism over the chasm.

Infection.—Infection requires drainage and systemic support. When it occurs as a postoperative sequel and definite symptoms of peritonitis develop, a stab wound under local anesthesia will often suffice, and should not be delayed until dangerous symptoms arise.

Postoperative ileus is of three types: Spastic, paralytic, and mechanical. The paralytic type is more common and usually responds to lavage, enemata and physostigmine salicylate hypodermically. Operation is contra-indicated, as additional shock and trauma would only aggravate the paresis. The spastic type seldom occurs except when intense autointoxication is present, and is usually relieved by intestinal rest and relaxation produced by morphia. The mechanical type more serious by far, requires relief by operation, as soon as the clinical symptoms give unquestionable evidence of bowel block.

As the conduct of complications of the heart, lungs, kidneys and stomach encroach on the field of the internist, I will not discuss them, except to remark that acute dilatation of the stomach is of sufficient seriousness as a postoperative sequel to justify careful observation of any case of persistent vomiting, abdominal distention, high pulse rate and elevated temperature. It is best controlled when seen early by the prone position, lavage repeated as indicated, stimulating intestinal peristalsis in the meantime.

DISCUSSION

Dr. W. B. Dorsett, St. Louis: I have very little to say, except in commendation, except along the line of preparation of patient and control of vomiting. It has been my custom, in preparing a patient for abdominal operation, to first get the intestinal tract as clean as possible; and I usually use salts. I prescribe about four drachms of salts and a bottle of solution of citrate of magnesia, and have the patient take one-fourth till bowels act, the afternoon previous to the forenoon when the operation is done. I have a number of times been consulted in the hospital by other men who have been somewhat alarmed and uneasy because the patient's bowels have not moved within twenty-four or forty-eight hours after an abdominal operation, but so far as I am personally concerned it gives me no concern. After the bowels have been thoroughly cleaned out the day before, as a rule, I have no trouble in getting bowels to move in three or four days. Of course, there are exceptions, as, for instance, in cases where there has been a good deal of vomiting attended by sickening nausea that lasts a long while and keeps the patient uncomfortable. I use lavage, but seldom have to use that. I think if we follow the rule that on the day before operation we have the patient use large quantities of water two to three hours before and then give the anesthetic, the patient will frequently gulp up the water put into the stomach and thereby lavage his own stomach. I dare say many men accustomed to administering anesthesia have noticed the swallowing that takes place, the deglutition of the chloroform or ether during the time the anesthesia is administered. There is no doubt in my mind that the ether passes into the stomach and produces irritation, a mild gastritis; by allowing ether to be absorbed by the water in the stomach, taken before being given anesthesia, and then vomited, the water intermingled with the ether or chloroform, as a rule, there will be no trouble.

In regard to purgation, I rely a great deal on proctoclysis alone. If proctoclysis continues a considerable length of time until the bowel will no longer retain it, wash the bowel out with your enema and follow it with glycerin enema, and you will almost always bring about the desired result. Particularly where an appendectomy or a resection of the bowel has been performed we should be most cautious in the administration of anything by mouth to get the bowels to move. I used to give small doses of calomel, but now very seldom do it, and if I do, it is simply to stop vomiting and not for purgation.

SOME PROBLEMS CONFRONTING THE SANITARIAN

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By way of apology, I will state that I have taken up in my paper a phase of sanitation that I do not remember having ever heard discussed in this Association—namely, Sanitation of Public Institutions. This part of the subject I believe would be more appropriate for some organization especially concerned in sanitation. However, some of my medical friends have urged that inasmuch as the sanitary problem is of state-wide interest, and all physicians should be sanitarians primarily, a discussion of the subject here would

be entirely opportune. I have yielded to this expression, but with some misgiving as to the wisdom of such judgment.

The problems confronting the sanitarian of the present and future generations are many and varied, the solution of which we can probably never hope fully to realize this side of the millennium. Indeed, during the progressive development of the nations of the earth the future study of sanitary science and preventive medicine will assume even greater proportions than it has up to and including the present time.

To the casual observer it would seem that in recent years rapid strides have been made along the lines of so-called modern sanitation, and that our present information on hygiene, sanitation and preventive medicine is largely an accumulation acquired during the last two decades, preceding which time the intelligence in thought and action pertaining to sanitary rules and regulations was of the most meager degree.

I believe that the above observation will be disputed by none, but, to the contrary, will be verified by many, including those in and out of the medical profession who have been keenly observant of scientific achievement along the lines of general progress, or the special lines as above indicated.

In proof of the above statement I would say that we, including the laity, are constantly congratulating ourselves on our advanced state of civilization. Certain evidences of advancement are that the scientific investigators, in the medical and allied professions, have demonstrated the causes of disease, and, this being known, the weapons of combat and defense are readily at hand, and can be more effectively used than formerly when we were working in the twilight, so to speak.

It was comparatively recent that we learned that malaria and yellow fever were carried and communicated by mosquitoes; that flies may carry germs of many infectious diseases—including typhoid fever and tuberculosis—that rats and ground squirrels are active media in the spread of bubonic plague; that the flea and tick may convey blood infectious from one person to another; that roaches may carry such diseases as typhoid fever, diphtheria, tuberculosis and perhaps many others.

The result of more recent investigation goes to show that poliomyelitis, or infantile paralysis, is frequently carried by flies; and very recently the bedbug—the little insect which we have instinctively feared and abhorred without knowing the reason why—is numerously charged with being the carrying-agent of the dreaded disease leprosy.

The above instances, citing the disease-carrying proclivities of insects and vermin, will probably not be questioned by any, and it is a safe prediction that many other now unaccountable

modes of transmission of disease will eventually be charged to various insects and parasites, as *particeps criminis*, if not the real offenders.

It is not the intention of this paper to convey the impression that insects are responsible for the spread of all contagions and infections; in a few only, as for instance, malaria and yellow fever, it is conceded to be the usual mode of transmission. In other diseases there are various well-known modes of transmission; in one case it may be insects; in another it may be direct contact—the sick with the well; or in others still, it may be the air, water or food which has become impregnated with the micro-organism of disease.

We now understand that all acute diseases are infectious, and, therefore, are due to pathogenic bacteria. Our aim is to remove the causes of disease when possible, to antagonize the germs after they have invaded the system, and to protect the patient from the ravages of such invasion as far as is practicable.

Following the old adage that a "prevention is better than a cure," we discourse very learnedly on the recent progress in preventive medicine. We are glorified in the thought of our up-to-datedness in every respect. We swat the fly and screen out the mosquito. We feel an inordinate pride in our personal hygiene, our sanitary homes and public institutions. Students of the public schools, high schools and colleges are instilled with the laws of sanitation and hygiene, and the important relation they bear to a vigorous constitution; and the building of these institutions is planned, specifically, with an eye to acknowledged sanitary requirement—such as lighting, heating, ventilation, sewerage, etc. Can as much be said regarding the state and its attitude toward its public and eleemosynary institutions? Hundreds of thousands of dollars are expended annually, for what? For the welfare and improvement of its citizens, the general up-build of the people and their institutions, and the protection, care and treatment of the state's unfortunates.

Then you say, considering these efforts put forth by the state for the benefit of its people and its institutions, that we, the people, have good reason for the feeling of private and public elation over such recent successful accomplishments.

In contradistinction to this plausible and popular idea—and this is the point I have been working up to—I would like to ask, What are we, the people, the state, doing for the sanitary improvement of our county jails and almshouses? To open up this subject with any idea of a thorough and much-deserved ventilation of its every angle and corner in detail is a task too monumental for one to undertake, even though he were competent to do so. The revelation, in full, of the existing conditions of many of the

jails of the state, would create a stench that would diffuse the atmosphere and penetrate the nostrils, and irritate the human sensibilities a thousand miles distant; and would freely ascend, and penetrate the impenetrable, in the heavens above.

What are these conditions? I will attempt to enumerate only a few of the more apparent delinquencies as I see them. To do the matter full justice, it would require one especially trained in the science of modern sanitation. My statement here will be based on information obtained direct from personal investigation of one of the county jails of the state.

Incidentally, I will say that it is not intended to convey the impression to the gentlemen present that the jail referred to is located in my home county, for we have been peculiarly fortunate in our county officials, having, in the main, men of executive ability, of public spirit and of personal and official integrity.

It is true that there is much room for improvement in the sanitary condition of the jail of my county, but the officials, being merely representatives of the people, are in no wise to blame for these conditions. County officials, very naturally, have a certain pride in well-equipped and up-to-date county buildings; and when the people are aroused to a full consciousness of their duty, and authorize such needed improvements it is welcome news to the officials in charge.

I will say, however, that the one herein designated is located within two hundred miles of this place, and is used merely as an illustration of conditions prevailing in many counties of the state, since I am informed that there are dozens of jails in the state where conditions will materially approximate the one which I will herein describe.

This particular jail was erected many, many years ago—before the sanitary era. The inside finish is all wood, except the cells, which are of heavy iron molding, tightly riveted; the upper wooden floor is also laid with heavy iron sheeting. The six-cell casting occupies a total floor space of 13 by 18 ft. Three of these cells open on the north, for colored prisoners; the other three to the south, for the whites. A small corridor, 3 ft. wide, running the full length of the three cells, closed in by iron rods, furnishes room for exercise of the prisoners. The cells are each 6 ft. wide, by 6½ ft. deep, by 7½ ft. high—a total air space, per cell, of 292½ cubic feet. When five persons occupy one cell, as has frequently been done, each person is entitled to 58½ cubic feet of air. At one time, as my information goes, sixteen prisoners were confined in the three negro cells for ten to fifteen days; and I am led to believe that this is not of such unusual occurrence as to excite comment. One door to each cell, 2 ft. by 6 ft., is the only passage for air. These doors are

cross-barred, with about two-inch lattice bars, which, as you will see, cover three-fourths of the door space. The commode, or stool, for the use of the prisoners is conveniently located in the corridor, almost in front of the cell door, about 18 inches away; when not in use for the purpose intended, it is used frequently as a chair or stool to sit or rest on. The mattress, 6 ft. by 5 ft., approximately, just about covers the cell floor. When five or six prisoners occupy a cell they must lie cross-wise or at least straight-wise. Prisoners are locked up in their cells at 5 to 7 p. m., and remain there until 5 to 7 a. m.—a total of twelve to fourteen hours. The jailor informed me that the cells for the whites were frequently as crowded as were the ones for the negroes. These inmates are frequently the subjects of various blood infections, which may be communicated by close contact, or by lice and other insects. In addition to this, their systems are poisoned by rebreathing their own exhalations. They sleep in their clothes, which they sometimes wear for weeks at a time without change.

These cells can be compared in construction and tightness to the vault usually found in all banks, and supposed to be burglar-proof—the vault to keep the criminal out, the cell to hold him in, dead or alive.

Many of these prisoners are boys in their teens, some of whom are committed to jail on what later proves to be insufficient or groundless charges; and in case of their inability to furnish bond they are confined and must constantly associate with hardened criminals of the worst type for weeks or months; and eventually, when they come to trial, are perhaps released as “not guilty,” or innocent. If guilty, they may be serving time for their first offense. All of them at one time, were first offenders. Many of them have good impulses, and, with proper environments, could be redeemed. As a result of such treatment, they return to their homes or habitats not only more degraded, but frequently afflicted with an infectious, or maybe an incurable disease, contracted while in the care and protection of the state.

To verify the foregoing statement, I could here relate a case of apparent tubercular throat infection contracted in one of these jails.

To say that such an institution is a hotbed of disease propagation, with the continuous spread, broadcast, by the thousands of prisoners annually, is no exaggeration.

The condition of some of the county almshouses is equally as bad as that of the county jails, a vivid description of which should cause a blush of shame to the cheek of the most unconcerned. Suffice it to say that the inhuman and unsanitary practices and customs at some of these institutions is a veritable abomination—a dis-

grace to any civilized and christianized country or community.

A jersey calf, a bergshire shoat or a pointer pup would receive more consideration—a hundred times more—than our human delinquents, moral, mental and physical, receive in many of our jails and almshouses. We point with pride to our modern school buildings, our fine court houses, our elegant churches and our up-to-date residences, all planned along the latest sanitary lines as regard heat, light, ventilation and drainage, but no thought is attracted to the poor, unfortunate criminals, who are often packed in their cells like sardines in a box, breathing their air over and over again, and who literally live in their own filth.

Where shall we place the responsibility? Certainly not with any one official or set of officials. Are we not all alike responsible? Evidently, “our personal hygiene is more highly developed than our public hygiene.”

The proper solution, as it would occur to many of us perhaps, would be a state sanitary officer, under instruction of either the State Board of Health or the State Board of Charities and Corrections; such officer to meet with county and local health boards, visit and inspect the jails, almshouses and other eleemosynary and penal institutions, attend the meetings of school teachers and give lectures, and otherwise instruct in public hygiene and sanitation. Said officer should have authority to apply and enforce all needed general rules in the sanitary management of penal and other state institutions, such as disinfection, fumigation, bathing of inmates, etc.

The recent statutory enactment creating a hotel inspector had little or no opposition, but was strongly endorsed by the traveling public. This inspector is allowed three assistants and one clerk, so I have been informed, at an expense of perhaps, \$10,000 or \$12,000 a year. His principal duty is to see that the sheets of hotels are of uniform length—9 feet. Incidentally, there are other duties of more or less importance. This law was a good step in the right direction, and especially from the standpoint of hygiene and sanitation.

Recently, the question of conservation has been uppermost throughout the land. The conservation of the health of the people should be the root and branch of all conservation; for it cannot be gainsaid that the general and public health of the state is a prerequisite to the happiness and prosperity of its people.

A state sanitary officer, or officers, properly constituted, should reimburse the state in improved health conditions a hundred fold on the investment. An appropriation by the legislature, equal to the amount necessary for the enforcement of the Hotel Inspection Law, would secure

the services of such men of experience and training as would guarantee a successful operation of the law with such future good results, as, at this time, would be inconceivable and incalculable.

This official force might well include a state sanitary engineer, whose duty would be the supervision of sanitary construction of state and county buildings. The same work in public school building might, with propriety, be left to the proper department in the state university.

The State Board of Charities and Corrections have been doing a splendid service, covering sanitary problems of public and state institutions; and, with the accumulated data which they have at hand, the question of state sanitary supervision might be safely entrusted to the protection and guardianship of this board.

Such state sanitary officers should have authority to condemn, as unfit for service, many of the antiquated jails (and almshouses) of the state. While the necessary improvements were being made, the emergency could be met by permitting the present cells to be used, providing that not more than one person could occupy a cell—such cells as have been described—and that cells be disinfected when vacated by each occupant, and at regular intervals during occupancy. Sanitary cots should be installed and other temporary improvements made.

All new jails (and almshouses) should contain a hospital ward with sanitary contents, including bath, and all prisoners required to bathe before being committed to their cells and at stated intervals thereafter. The local or county health boards should have authority to enforce such reasonable sanitation in conformity to state board law and regulation.

Under existing laws, the authority of the local health boards and jail physicians is very much restricted in the enforcement of public sanitary measures; and with the dilapidated condition of some of the jails, the best that could be done would be totally inadequate.

As stated at the outset, the problems involved in up-to-date sanitation are many. The question of controlling small-pox might well be included in this list. A compulsory vaccination law, rigidly enforced, would solve the problem promptly, and would keep it solved so long as the requirement was observed. Vaccination will not only prevent small-pox in the individual, but the disease will not spread in a thoroughly well-vaccinated community.

Another problem which can be commended for present and future consideration is the medical supervision, or inspection, of public schools. In populous communities, including cities of the larger classes, such supervision is very justifiable and will yield abundant good returns. In the counties and smaller towns the time is perhaps

not yet ripe for the successful execution of such a plan; however, it is of the utmost importance that instruction in sanitation, hygiene and preventive medicine should have a prominent place in the curriculum of the public schools; and teachers should fully understand that fever is almost always due to an acute infection, and consequently, that a child with a fever probably has an infectious disease which may be communicated to others. Any child with a fever should be sent home promptly.

There are many other sanitary problems, too many to even enumerate in a single discussion. The sanitary field is a boundless enclosure, and, as one's vision is strengthened, the field grows larger. Individual endeavor often appears lonely and solitary; for in this vast field one can hope to turn only a few clods, comparatively. However, if all can be brought to realize their duty and each proceed to turn his share of clods, the total task will be fractionally divided, the individual's share being proportionally light.

In conclusion: Some additional sanitary laws are an urgent necessity. Sanitary education is very desirable, but to be effective in some of its details, certain laws must be enacted.

The sanitary regulation which forbids passengers the common drinking cup on trains is in marked contrast to the law which permits a judge to consign as many as 5 and 6 prisoners to a 6-ft. cell or vault for weeks at a time. All this in the Imperial State of Missouri.

The reason or excuse for these present conditions must be obvious. Is there a remedy? Answer, yes; a state sanitary officer with authority to act; education, legislation, and last but not least, agitation.

DISCUSSION

Dr. M. A. Bliss, St. Louis: I was pleased to hear this paper of Dr. Reid's. I feel that conditions he described are permitted to exist because of the failure of the physician in the community to be familiar with the local conditions. Miss Forrester has made a very extensive investigation of the jails and almshouses of Missouri. Some of her pictures were shown us last night. I feel that the Missouri State Medical Association should stand for the betterment of the conditions in communities where each one of the members happens to be. I believe we ought individually to take an interest in the eleemosynary institutions. If the State Board of Charities can stand an expense of \$2,000 for the investigation they have made and a further expense for the dissemination of this information over the state, it does seem to me that the Missouri State Medical Association ought to stand for its duty in this direction, and this duty would seem to be largely individualistic. I would really like to know how many of the men sitting here to-day are familiar with the county almshouse of their own county. If they happen to be county physicians, they are; otherwise, probably not. They probably have not seen their own jail. They don't know the conditions there unless they have happened to inquire. I do earnestly hope this very excellent paper of Dr. Reid's will stir each one to a realization of his duty.

Dr. W. G. Moore, St. Louis: I wish to move, if I can get a second that the State Medical Association of Missouri thoroughly condemns after a full investigation the so-called almshouses that disgrace this proud state, and will organize for the purpose of wiping out this disgraceful condition, and putting on the statutes a law that will protect those who have no protection. I don't know anybody that I would rather see dignified in the medical profession than yourself, Mr. President, and if it occurs in your administration that we can do such a thing, your name will go down linked with an honorable act.

Dr. J. C. Boone, Charleston: As a sanitary officer at different times I have realized the impossibility of applying the knowledge that the medical fraternity has of preventing just such conditions as Dr. Reid has described in his paper. The laws of Missouri are particularly inadequate for the correction of existing conditions. We have no power to do much of anything in the county. I don't know how many doctors have been into the county jails; I have been in our county jail (in a professional capacity, of course, altogether). I hope that none of you will ever have to go into one, even in a professional capacity, because it is absolutely ridiculous to attempt to do anything in a medical way with the patients herded in a jail, unless it is in much better condition than our county jail, and I think they are all about the same.

I want to commend Dr. Reid's paper. I think it is a good one. It might be advisable for this association to appoint a committee to draft such resolutions as may be necessary along the lines that Dr. Moore laid down, and that they have some power to act and develop the line of work suggested by Dr. Reid's paper. It may be possible to get it before the next legislature, in some sort of shape. The trouble with this work is that you get before the legislature late, while the other fellow is all prepared for you.

Dr. H. L. Reid (in closing): I don't know that I have anything to add to what I have said in the paper. It seems that all who have spoken are of about the same opinion—that something ought to be done.

At the last session of the legislature the State Board of Charities had a bill before the legislature for the enactment of a law giving authority to the board of some supervision over public institutions. They have certain authority but it is simply authority for investigation and report, and that is all that comes of it, and with restricted means at hand their efforts have been very much curtailed. The appropriation heretofore has been, perhaps, \$3,000. At the last session of the legislature they applied for \$12,000 and the legislature after arguing the question allowed them \$3,000 or \$4,000, so the State Board of Charities and Corrections are going to be better prepared to handle this question in the future than they have been before, and with the encouragement of the State Medical Association I feel sure they will get an additional increase at the next session of the legislature and perhaps much can be done along the lines that have been brought out in the discussion.

My remarks were based on personal observation of one county jail only. I tried to get the report of the State Board of Charities and Corrections, but at the time I decided to write on this subject, the report was not out, so I took my text from this county jail and wrote my sentiments in a general way. In fairness to the jailor, who very courteously showed me through the county jail and seemed very anxious to do all he could, I submitted this description of the jail to him. I thought possibly he would consider it an indictment against him, but after he had read it, he said: "You haven't made it a d— bit too strong." I thoroughly appreciate this free and full discussion, and feel that if we will continue to be as interested as it seems we are to-day, some wholesome action will evolve from it in the future.

ACCIDENTS DUE TO ELECTRIC CURRENTS AND THEIR TREATMENT*

WALTER R. HEWITT, M.D.

ST. LOUIS

I was prompted to present this subject for the following reasons, namely, (1) The increased use of high-tension currents having brought about an increase in electrical accidents; (2) a recent successful resuscitation by the pulmotor, and (3) on account of the meager information contained in the literature.

Electric currents produce two varieties of injuries: First, shocks of varying severity, dependent on the tension or voltage; second, shocks and very severe burns, dependent on contact with "live" wire, or by short circuiting a strong current.

Briefly, by autopsies on electrocuted criminals, by observations and much experimentation, the following facts have been determined:

1. That strong electric shocks produce powerful tetanic spasms of all the muscles (jaws usually not affected), through the violent irritation of the afferent nerves and muscular tissue itself.

2. No markedly harmful histologic change is produced in any cases, and in most cases no histologic or chemical change can be found.

3. The violence and suddenness of the irritation soon brings about an exhaustion of the innervating mechanism of the muscles and probably, in some cases, so disorganize this innervating mechanism that no subsequent coordination of cellular action is possible.

It is evident, therefore, that many cases of severe electric shock are hopeless from the beginning, but in view of the fact that the first glance does not tell one what cases may or may not be resuscitated, it behooves us to make a faithful attempt at resuscitation in every case, and only after two hours' labor should one despair.

Experimental and clinical investigations have shown (1) that fibrillary contractions of the heart and respiratory paralysis are the chief causes of death from electric shock; (2) that the tendency of low tension currents is to kill by cardiac fibrillation, while that of high tension currents is to kill by respiratory failure, owing to the more pronounced effect on the central nervous system; (3) that cardiac fibrillation is fatal in spite of any treatment and occurs especially with low tension currents; (4) that in cases where simple respiratory paralysis occurs, artificial respiration until the central nervous system recovers from

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the effect of the shock will usually result in recovery; (5) that the effect of alternating currents depends especially on the tension (voltage) of the current, the frequency of the cycles, the duration of the contact and the course of the current through the body; (6) that many questions are as yet unsolved, though electricity is destined to be the motive, lighting and heating power of the world.

Treatment.—Arriving on the scene of an accident, one should first see that the circuit is broken; if unbroken, turn off the switch, or free stricken person after removing coat to stand on; do not stand on anything moist, or containing knife, keys and the like, metallic substances being good conductors. Then proceed to free the person with aid of piece of wood or by covering hands with cloth, free from buttons, etc. Do not touch patient about pockets, where he has buttons, keys, knife or money; therefore, grasp him by the shoulders (i. e., with rubber gloves or tongs).

If unconscious, see that there is no slime or mucus in throat. Remove false teeth, tobacco, etc. Place patient in "prone pressure" position and proceed to give artificial respiration. Do not forget to keep head low, and, if assistance is present, rhythmically carry out movements of tongue.

After this has been done, you can examine for heart-beat, and if absent, stimulate it by striking fist against chest, slapping with towel and alternately rubbing chest with hot and cold towels, taking due care if there be any broken bones. At the same time revival should be attempted by brushing the soles of the feet, by external application of heat (if permissible), cold injections in rectum, using a soft irrigator, or by dashing hot and cold water alternately on chest. Dilatation of the sphincter should be performed and artificial respiration must be kept up, stopping occasionally to see if natural respiration is returning. Remember that Crile and Dolley were uniformly and readily able to resuscitate animals after death from chloroform, ether or asphyxia, up to five minutes, provided their technic was carried out, and up to ten minutes there was an occasional failure.

Consciousness may be restored by slapping the face or shaking.

When patient becomes conscious, warm drinks such as coffee, tea and alcohol may be given, but the patient should remain in semi-prone position.

At this stage the head should be kept slightly raised instead of being lowered, so that a passive hyperemia of brain will not ensue, and the treatment of minor injuries should be postponed, except in case of hemorrhage.

Even in cases where the patient *appears* to be dead, keep working. Do not leave patient, and

if accident has occurred in a cellar, do not lose time getting him out in the fresh air, unless the place is very handy.

Jellineck states that recently a physician had the courage to say that the restoration of the heart-beat was the most important, but he says this is a mistake.

Remember that manual artificial respiration, when begun early and properly carried out, has given results, even after hours of labor. Do not neglect artificial respiration to give stimulants, as camphor, etc. If in a hospital, the nurse can do this. Massage of heart and chest is good. *Keep mouth clean*; this is very important if success is to crown your efforts.

There are a number of methods of artificial respiration, but with tetanic contractures of the muscles (as in my case) I found Schäfer's "Prone Pressure Method," with rhythmic movements of the tongue, the best. It is especially well adapted to cases where there are burns of the arms, and in cases of multiple fractures.

The Draeger pulmotor is the best replacer of any known method of artificial respiration. The pulmotor is a machine which automatically carries out respiration and was highly recommended by Professor Roth of Lubeck. It is based on this combination of known principles:

In 1792, Professor Zarda of Prag mentioned the point of light pressure on the prominent part of the Adam's apple in regard to the direct method, or mouth to mouth method, of artificial respiration.

It was in 1794 that Günther, in "Instructions for Reviving Drowned," mentioned the effect of artificial respiration on reestablishment of circulation of blood and heart action.

Therefore, the principle of the pulmotor is not new.

While the pulmotor is working, many other details may be carried out. The method of Crile and Dolley should be tried.

The method of Crile and Dolley is as follows: 2 c.c. of 1-1,000 adrenalin solution should be given directly into a vein, and if heart action does not begin, cardiac massage should be instituted. This method may be combined with the high-tension contacts of Batelli, Ledue or Robinovitch and may bring about resuscitation in cases of cardiac paralysis, lasting up to five minutes after accident. In desperate cases, if in hospital, chest should be hastily painted with tincture of iodine, and adrenalin injected, as recommended by Blair in "Treatment of Air Embolism." Blair says, that a fine needle should be inserted through the anterior chest wall and lung, directly into the right ventricle, and he selects the site of the anterior extremity of the third or fourth right intercostal spaces. He also resuscitated two dogs from air embolism by using adrenalin and direct

cardiac massage. In following the method of Blair, Ringer's solution is to be preferred, as it yields more favorable results than saline. Remember that, in a desperate case, the pericardium should be opened and direct massage begun, as Crile, experimenting on dogs, revived one by simply slitting the pericardium open.

Since commercial currents are usually high tensioned, alternating currents of varying frequency and high amperage, and produce death by paralyzing the respiratory centers, artificial respiration is indicated, and when combined with the direct current, interrupted six thousand or more times per minute through the chest, and the current is so applied that it will traverse the heart, according to the recommendation of Robinovitch, recovery in many cases can reasonably be expected. Jex Blake, in speaking of lightning cases, says, continue artificial respiration until cooling of body and rigor mortis set in.

The period of apparent death is short, four to five minutes, and therefore ordinary methods of artificial respiration are of prime importance. By these means the patient may be kept alive, and the pulmotor may then be used.

After recovery from the shock, the patient should be kept quiet for a period of a few days to one week.

Camphor, ether and cardiac massage are best for the heart, while venesection may be done to relieve the venous system, being careful to stop artificial respiration while so doing and thereby prevent air embolism, of which Jellinek reports seeing one case. Ringer's solution is better than saline for an infusion.

Cerebral symptoms are best relieved by lumbar puncture, and if fluid is under pressure, quite a bit can be removed. For headaches, warm baths and cold compresses are recommended. For restlessness, delirium and sleeplessness, use bromids in moderation. CHCl_3 inhalations are valuable to allay restlessness, especially when due to high temperature, as in Case 2.

Ophthalmia electrica is an affection primarily of the conjunctival sac and superficial layers of the cornea and supposed to be due to the ultra-violet light which produces symptoms of a burning, stinging nature of the lids and conjunctival sac, photophobia, lachrymation and diminished visual acuity along with an increasing sense of distress. In my cases the onset of symptoms was from a few hours to sixteen. One case showed pronounced symptoms four hours later. The average period of development was eight hours, although milder cases did not develop until later. In every case, about twenty-five in all, complete recovery was the rule in one to four days. The sources in all of my cases were short circuits or electric flashes.

Ophthalmia electrica is best treated by a few drops of cocain instilled into the eye, cold compresses, dark room and keeping eyes covered up. Various grades of the affection require some variation in treatment.

Burns demand a modified open-air method. Watery solutions are best avoided.

The routine procedure which we have followed for two years is to apply menthol, 5 to 10 gr. to 1 ounce of vaseline (occasionally adding phenol), and later removing the dead skin, after which plain vaseline or a mixture of zinc oxid and bismuth subiodid is employed (made fresh). Occasionally, a glycerin-bismuth subiodid dressing is applied.

I have yet to see, after about sixty cases, a single case of second-degree burn with any permanent impairment of function or scarring. In two cases, both very severe second degree burns, baking readily cleared what looked to be permanent stiffness of the fingers and resulting contractures. I would highly recommend it in such cases.

Skin-grafting, using amniotic membrane (taint-free) may be used, though Stern has not done so. However, the grafts should take when the wound is granulating.

CASE 1. M. J., white male, laborer, single, 19 years old, injured March 6, 1913, at 9:50 a. m., probably by trolley wire striking a shovel which he carried on his shoulder.

He was picked up unconscious by his fellows, and after twice being regarded as dead was placed on a car and rushed to the city, a form of artificial respiration being carried out by jolting of car. I saw him thirty minutes later, when respiration could not be detected, pulse barely perceptible, patient unconscious and cyanotic, muscular system affected, especially the arms, which were flexed and held vice-like, the jaws being loose. Sylvester's method of artificial respiration was tried, but could not be carried out, on account of the spasticity of the muscles.

With a modified prone pressure method, in auto and with assistance, I gave artificial respiration until the Missouri Baptist Sanitarium was reached, where the pulmotor was applied and the machine set to work. Forty-five minutes later patient was conscious and respirations, which had gradually become deeper and more regular, were normal. Heart and pulse showed a similar improvement, and color became pink.

Stimulants.—Digitalin, camphorated oil, atropin and black coffee as soon as he was able to swallow; also proctoclysis and external heat.

Three hours after use of pulmotor patient was smoking (he has been a strong smoker). Patient was put on liquid diet. He had slight headache, and was discharged from the hospital four days later with no apparent ill effects.

CASE 2. J. K. This man received a short circuit of 6,600 volts May 14, 1913, at 7:45 p. m., through a contact, probably with the right chest and with his hands grounded on a copper strip. He received three flashes. He was probably in contact with the wire for five seconds, as near as could be estimated, and was freed by the prompt action of a fellow employee, who used a stick to free him. After he was free arti

facial respiration was at once instituted, though the patient was thought to be dead by his fellow workmen. In fact, his fellow men were on the verge of leaving him when they recalled their instructions, which they proceeded to carry out. He was taken to the Missouri Baptist Sanitarium, where his respiration was very shallow, patient wildly delirious, temperature 103.6, axilla, pulse 102, three hours after admission (facial). The blood-pressure was high. He sustained first degree burns of the face and upper arms, probably from the flashes; second degree burns of the right forearm and wrist, third degree burns of the fingers and wrists of both hands. The bones in the hands were burned through. It was necessary to give patient a good, full dose of morphin to quiet him. The wounds were rapidly dressed with the usual dressing. Pupils were moderately contracted. Respiration persistently remained irregular and was shallow; accordingly inhalations of oxygen were given with the pulmotor on inhalation. The respiration improved and became regular, full and deep. The pulse in the facial artery was always good. With the improvement in respiration the patient's color, which amounted to a cyanosis, became flushed. The temperature gradually dropped and ten hours after the accident the patient was conscious, pulse of good volume and patient doing well. Along with the oxygen inhalations it was noticed that the tetanic contractions of the muscles showed a gradual relaxation and I was necessarily guided by this, as his blood-pressure, though high, and which we were prepared to take, could not be taken on account of extensive burns of the hands. This case is the first case in St. Louis on record where a man received 6,600 volts of a direct current and yet survived. It is a beautiful illustration of what fellow employees can do and how they may frequently save a comrade. Any method of artificial respiration is good, although the prone pressure method was used in this case to good effect. Dr. John P. Murphy saw the patient about twenty minutes after the accident and carried out artificial respiration until the patient reached the hospital, at which time he became very restless. He was catheterized at the hospital six hours after admission, an ounce and one-half of urine being obtained. The urine contained enormous amounts of albumin. He voided 4½ ounces of urine in the thirty-six hours following the accident, which, with a history of being under a doctor's care and having headaches the evening of the accident, suggested a possible uremic condition. He was given 1,650 c.c. of normal saline solution beneath the skin, diuretin, camphorated oil and epsom salts, but to no avail, and he gradually became unconscious, pulseless and died about thirty hours after the accident.

The post mortem report revealed: Superficial burns over the left side of the face, right cheek and nose; chin covered with blisters; second degree burn right chest, 3x7 inches, and superficial burns left chest measuring 2x3 inches. There were superficial burns over both upper arms, inside of both elbows and in left axillia; from about the middle of the forearm below the wrist the skin was burned away on both arms; the left hand was charred across the knuckles nearly completely through the hand, so that the bones were exposed; the skin was off all the fingers and the bones of the little finger were exposed; the right hand showed a deep burn, exposing the bones of the little and ring finger; the ring finger practically completely destroyed; rigor mortis was absent; the brain was edematous and congested; the posterior wall of the ventricles of the heart showed punctate ecchymoses into the epicardium; the arteries showed slight arteriosclerosis; the kidneys were of normal size, dark

red in color and the capsules stripped easily, leaving a smooth surface; there was a normal appearance to the cortex and medulla; the left kidney showed several cysts, ¼ to ½ cm. in diameter. The Coroner's verdict was that the man came to his death from shock and burns due to coming in contact with an electric wire while installing a flat copper strip on lightning arrester.

Comment.—This case emphasizes the facts that high-tension currents probably paralyze the respiration, although my data are only limited on this subject. That currents of high voltage in themselves are not always fatal and death is frequently due to the severe burns which they suffer. It also emphasizes the importance of prompt aid, as this man received artificial respiration at once and within three feet of where he fell. Judging from the post-mortem findings, cases doing badly might be benefited by repeated lumbar punctures, thereby relieving edema of brain.

In conclusion, I wish to emphasize that the pulmotor is the best replacer of artificial respiration known, carrying it out rhythmically and automatically and is especially valuable where there are broken bones, arms, ribs, etc. Remember that cases of suspended respiration should not be left to die, as has been the case in the past.

Remember, cases are on record, and by good authority, where the pulmotor has caused the heart to start again and respiration to return, thereby confirming the experiments of Crile and others.

Remember that the margins of the central tendon of the diaphragm are prolonged on the walls of the inferior vena cava as it passes through the foramen venae cavae. Therefore, the contraction of the muscular fibers of the diaphragm (which has been demonstrated) will tend to increase the size of this opening and the caliber of the vein which it holds, while the aorta is unaffected owing to its being placed behind a fibrous arch. Hence any rhythmic and automatic method of artificial respiration should be a distinct aid in reestablishing circulation as a sort of milking of the blood toward the heart would be carried out in the movements of the diaphragm. This belief is strengthened by the known fact that the blood remains liquid for three to six minutes after sudden death, which again emphasizes the fact that early artificial respiration by any method will give the most recoveries, especially when combined with adrenaline.

I wish to express my thanks for the valuable translation made by Dr. H. E. Kleinschmidt of an article by S. Jellinek.

NOTE.—Some thirty lantern slides were shown, illustrating the method and principle of the pulmotor, and demonstration of the machine in operation. All the cases were from the medical department of the United Railways Company of St. Louis, Mo.

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THE PHYSICIAN, THE PATIENT AND THE SURGEON*

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In writing this paper it is my purpose to describe present conditions and difficulties with the hope of aiding in their solution.

Social and economic practices change according to conditions and as the medical fraternity is not exempt from this law of development it becomes necessary at this time to consider the relationship of the physician, the patient and the surgeon.

I have placed the patient in the middle to call attention first to his unfortunate position in those cases where he has fallen into the hands of a physician who is more concerned about his own welfare than that of his patient.

It is a common practice for a physician to consider himself relieved of all responsibility when he refers a case to the surgeon. In my opinion this is wrong. The physician ought to share the responsibility with the surgeon. The family expects this of him and looks to him for guidance because they do not know what is best to do. The family doctor is their most reliable source of information and should so inform himself as to justify that position and guard the patient against the common errors of secular judgment.

We all know how often a popular reputation for surgery is built on shallow scientific knowledge and even technical skill. Men frequently gain considerable notoriety for doing a certain kind of work for which they are not really qualified. Their reputation, as far as the general public is concerned, grows out of their boldness in cutting, combined with a certain amount of mechanical skill, and they build largely on this. The laity does not know that this does not make a good surgeon and that a man should have a profounder knowledge of surgery than the mechanism of that science. I see so much of this superficiality that I sometimes think the human flesh heals all too easily for the good of the race.

Notoriety comes so easily and quickly, and the financial returns are so much better in surgery than other lines of the healing art that many rush to it who are not well qualified and certainly their results do not justify their claims. By a system of advertising so ingenious that it is ethical they become prominent and the laity flock to them. They cut open a number of women, remove more or less diseased tissue, get more or less satisfactory results which are duly and favorably heralded, call themselves specialists, and their fame is abroad. Local physicians acquiesce from motives of prudence or indifference. It is a difficult matter to combat with them. Many of these men consider themselves really qualified, but the physician who attends the patient subsequently sees the meagerness of the benefits. Under these circumstances should the physician do nothing or say only non-committal things, or, for ethical reasons, make excuses when if he knows any pathology, he must know the results are far less beneficial than the patient had a right to expect? Instead, would it not be better for the patient and, eventually, for the physician to say where the best work can be done and then if the patient decides to take a chance on inferior work the physician is absolved from further responsibility.

The relation of the patient to the physician and surgeon is of a complex nature; one of the primary features of which is a satisfactory monetary consideration. How is this to be accomplished? A variety of methods are employed, one of which is a secret division of fees which is generally condemned. I have no doubt that there is ample reason for condemning this plan; but to go so far as to have a law passed making it a felony is of doubtful benefit. If such a law ever amounts to anything more than a dead letter its most probable result would be some useless litigation.

While a secret division of fees is capable of the worst sort of abuse, an open, definite one has some common sense to recommend it. The plan proposed by a hospital and its surgeons in this state of giving a definite percentage might work well if all adopted it with a minimum charge established. I have had patients of good business sense say they would prefer this sort of an arrangement as it would simplify matters for them. The plan used by most physicians I judge to be approximately this: The patient pays him for the advice as in an ordinary office consultation or a visit and a per diem fee if he accompanies the case. He usually tells the surgeon the patient's ability to pay, and if he knows the surgeon's practice, tells the patient approximately the cost. It has been my custom to state in advance the fee to be paid the surgeon based on the patient's ability to pay. This plan is not without its objectionable

features, two of which are, it does not remove the suspicion of a secret division of fee and it opens up the way for enemies to insinuate ulterior motives.

I am not personally interested in the question of fee-splitting, but I have watched the contention, and I am convinced it is largely based on avarice. The surgeon wants all he can get and is willing for the physician to sacrifice not only his time, but the major part of a just fee, in order that the patient may be able to have the work done. The result is that the physician has seen his work curtailed and his income lessened. Two things have come of this, namely, the physician has been led to the secret fee-splitting surgeon, or else, he has held on to his patient by doing palliative treatment when more radical interference should have been advised, and, finally, the patient has been taken to an incompetent man which is more serious than relieving him of his money.

Another evil to which I wish to refer, not related to the fee-splitting doctors, but which is rather intimately connected with the physician and surgeon. Some surgeons of high standing have shrewdly used this fee-splitting agitation for gaining public notice. By newspaper interviews they have gotten favorably before the public and then adroitly subsided leaving the odium on the family physician. Little consideration has been shown those physicians who have had to bear the burden of the contention. Again, the surgeon, by his lordly superiority of manner, has consciously or unconsciously placed the physician in an inferior light before his patient, thereby lessening his standing not only with the patient, but with the family. Furthermore, in those unsuccessful cases he frequently throws the blame back on the physician by claiming it came too late, or else in case of death, by intimating the patient should never have been removed from home. But where a case recovers, it then becomes a question of "Now what do you think of your Uncle Munn?" to use the cartoonist's way of expressing it.

The previous care of the case and the physician's judgment are ignored. I do not condemn the surgeon for the exercise of that authority which rightly belongs to him. But I think the relationship between the physician and surgeon should be closer. Our duties are conjoined. We are related to each other through the patient and we ought to find some plan by which we can cooperate both for the good of the patient and for each other. For some years the drift has been towards the hospitals, and the physician is becoming a sort of advance agent for the surgeon.

Sanitary regulations have deprived the physician of nearly 40 per cent. of his work, and is constantly increasing that percentage. Now, the physician conscientiously aids in that work and

receives no remuneration. Add to this that there are in the United States only six hundred and forty people to every physician, irrespective of the various isms, and the situation of the general practitioner becomes acute—particularly the question of his remuneration.

By a clearer understanding between the doctor and the surgeon these three results would follow, viz., better results to our patients, financial relief to the physicians and a freer willingness to refer cases to the surgeon and the hospital.

My purpose in writing this paper and stating plainly some of our evils is simply to call out discussion and stimulate more frankness in looking at the situation.

DISCUSSION

Dr. A. S. J. Smith, Dearborn: I think one thing that will result from this discussion is that the country physicians will go to doing their own surgery and that is really what I advise. The practice of surgery is not so complicated as that of medicine, anyway. If you know of any surgeon that will refuse to give you a part of his fee, I would like to meet him. They will stand up in our sessions and carry on this grandstand play and when you go to them privately they have no hesitancy in granting you a part of the fee and soliciting further business on the same proposition. This at least has been my experience. When a country doctor shares the responsibility, when he finds the patient and takes him to the surgeon, what is really wrong with him having a part of the fee so long as the surgeon does not charge the patient any more than he ordinarily would if the country physician was not in the case? What is the objection? I want to say that you are making a bugaboo out of this subject and even though laws were passed to this effect they would be like a great many other laws in this state—ignored and worthless.

Dr. W. S. Allee, Olean: I don't like to take up the time of this session, but I want, on behalf of the country doctors of Missouri, to resent the imputation that they are in the habit of soliciting a division of the fee from the surgeons. I want to say that the doctors in my section of the country are not in the habit of doing that. I don't know of a doctor in my country that would permit a surgeon to offer him any part of the fee. I have been in the practice of medicine about thirty-eight years. I do some surgery. I don't pretend to be a surgeon. I have had occasion to take a great many patients in the last thirty-eight years to surgeons, and I want to say this, that I have never taken a patient, nor advised a patient of mine to go to a surgeon because the surgeon happened to be my personal friend. I have always tried to advise my patients in their interest. It is a serious matter to the average patient in the country going to the city for a surgical operation. They are weighed down with care, anxiety and fright, and I have come with patients to St. Louis and taken patients to Kansas City. Unfortunately it has been my experience that my friends and patrons generally, when they need a surgical operation, were unable to pay for it. I have had patients operated on by competent surgeons who got no fee out of it, because I simply said to the doctor, "This man is not able to pay anything. His friends had to raise money for him. I have come with him, paying my own expenses. I don't ask you to give me anything." I have yet to meet the surgeon who would enter a protest or complaint, or say anything but, "If this man is not able

to pay, that is enough for me." I have sent patients who were able to pay; I have never suggested to the surgeon what he should charge. When I have come with men in that class, I have exacted pay for my time and my expense and I have exacted it from the man. I have had, as I think, the good sense and the manhood to say to him, "If I go with you, it will cost you thus and so." I have said, "I don't know what the surgeon will charge you. You are able to pay the fee. Any arrangement you make with the surgeon is satisfactory to me. It does not concern me. I am advising you to go to him, because I think he is a competent man. It is not a question of a few dollars with you. You are able to pay your way. Go and make your arrangements."

I have noticed in the papers that the country doctors felt, or demanded, that the surgeon should pay the fees. I don't believe there is one country doctor in fifty in Missouri that would demand, or accept, a division of the fee from any surgeon, and I will say this, Mr. President, that if any surgeon ever offers to divide the fee with me, he would never get another patient from me, because I don't think it would be manly to do so. I am surprised that the doctors cannot get pay and defend themselves. I don't believe the country doctor is going to be driven to the wall; the competent doctor is getting his fees now just as he always has and always will. His patients will respect him, will pay him for his services what he demands and allow them to make arrangements with the surgeon when he is able to do it. If a man is not able to pay, I think it is my duty as his friend and family physician to tell the surgeon. I brought a lady here for a hysterectomy a few years ago, and I said to the surgeon, "This lady can pay \$25, and that is all she can pay. Her brothers have raised that for her." He said, "If you say so, I won't charge her anything." I said, "There is \$25 to pay. I don't offer it as a fee, but that is what she and her family are willing to do and I ask you to accept that. She is able to do that."

On behalf of the country doctors, I want to resent the imputation placed on them by the public press of this city, that they are demanding or accepting a division of the fee from the surgeon.

Dr. W. T. Elam, St. Joseph: This raises a question in which there might be some feeling aroused, and it seems to me there should not be. Dr. Allee speaks for himself, and not only for himself, but for the majority of the men who practice medicine in the country districts, or general practitioners. I do some surgery. I have always tried to keep my surgical work like Dr. Allee has his general practice, clean. I believe in keeping it clean, but yet Dr. Allee must recognize (and I am not saying anything against the country physicians; I appreciate all he says, and I know it to be true), that there are a few doctors in the country who do solicit a division of fees. On the other hand, those who do surgery recognize and know that in their communities there are some who do solicit and offer to divide fees. They are probably no greater in proportion than the country doctors who are soliciting fees. Gentlemen, this is not to be settled altogether on the surgeon, nor is it to be settled on the country physician or general practitioner. We are both partly to blame.

Speaking of the paper. The paper brought out some very good things. It was an excellent paper. We all know there are certain men who do surgery who are and might be classed as operators, and there is another class of men who should be, as a matter of respect, called surgeons. The man who goes in the belly and incidentally removes an appendix where there is no pathology and gets away with it and his patient gets well, unless he knows and has had an experience sufficient to enable him to understand the pathology that

he might accidentally find and what might have to be done to correct or remove that pathology and what the subsequent results might be—is not a surgeon. In addition to that, he ought to know not only these things, but ought to know with a fair amount of distinctness what the condition is. This is not always possible in internal organs, in abdominal organs, but the average man with the average experience can make a fairly good diagnosis in many instances. He should also know what the removal of that part means to the economy. He should know the anatomical relations of the organs to be removed and the routes by which they may most easily or effectually be reached, and to say that the taking out of the organs is all there is to it is not true. The removal of organs means much to certain individuals in certain stages of life and their removal should not be attempted nor be countenanced unless their being allowed to remain is a graver menace to the health and life of the individual than their removal would be. The most dexterous men you see doing surgery are sometimes merely operators. They are not diagnosticians. They don't concern themselves materially with what the results are going to be, and they are not really entitled to the name of surgeon.

The question of the relation of the patient and the surgeon is an important one. I prefer in every instance when men bring business to me that they come with the patient. Why? First, many times they have made a correct diagnosis—I should say, most usually they have made a correct diagnosis. Second, it is on them that the after care and the future care of this patient depends. They should really be present and see what operative measures have been performed, how they were done and the various features in connection with it.

Another thing Dr. Allee brought up; gentlemen, this is not a question of always bringing a patient to a surgeon with a good, big, fat fee attached. I take care of the charity work of those men who bring me business the same as I take care of the work that pays me and, as Dr. Allee says, so do other surgeons. You never saw a surgeon back down on an operation because there was not a fat fee, for that matter any fee connected with it. It is part of the policy of surgery to take care of the charity work of their referring physicians, and should be, and when you come to talk about the enormous fees of surgeons. I, for instance, one year kept track of the charity work in comparison with the work I did that I was paid for. I want to tell you I did twice as much charity work as I did work I was paid for.

Dr. Robert M. Funkhouser, St. Louis: I did not intend to make any remarks, but I will ask what is meant by the splitting of fees. I dare say there are many men in this assembly who do not understand what the splitting of fees means. I take it to mean the secret splitting of fees. That is what it is, the secret splitting of fees. The secret splitting of fees is a blot on the medical profession. We cannot afford at this time to go before the people of this country and say we demand or favor or only acquiesce in the secret splitting of fees. It is bad enough to be accused of being a trust. We are not a trust. The attitude of the people toward the medical profession is not altogether friendly. How much money has been given to medical education by rich men? The givers are few and the amounts are small. A distinction must be made between medical education and medical science. A great deal of money has gone to medical science, but very little to medical education. The rich man knows he is exploited by the doctor. Too often he knows he is asked for all the doctor can get. What is the result? It is this: There are men in the medical profession to-day who have been honored by the medical profession and who are a blot on the medical profession.

The idea of charging thousands of dollars for an operation! It is not worth it. The medical men gives so much no more, and you cannot say a millionaire should be charged in proportion to what he is worth. The country doctor sees this, and as a result an evolution is in progress. The practice does not go to the cities as it used to. The men at the cross roads are fitting themselves to perform operations, and they find they can do them just as well as the other fellow.

There must not go abroad the impression that the organized medical profession is a trust. There is a tendency to charge outrageous prices, but it rests with the rank and file to disabuse the public. As to fee-splitting, I know it has existed and does exist, for I have seen letters and have gotten them from reputable men in the city of St. Louis and throughout the state of Missouri who have asked, and from those who have been willing to give a percentage.

Dr. C. Lester Hall, Kansas City: That was a fine talk Dr. Funkhouser and you gentlemen have given us, and Dr. Boone's paper deserves attention. At the same time, this whole discussion is *post hoc*, because the House of Delegates day before yesterday settled that question and very much to the relief of everybody. I am satisfied that the surgeons who have been willing to divide fees, and the physicians who want their part from the surgeons will welcome the decision of the House of Delegates on that question, making it so you cannot stay in the Society if you accept or give a fee secretly, as Dr. Funkhouser said. Every man should have his fee and proper courage to deal with the public will make it easy. We got into trouble over this years ago, and I believe every one will welcome the decision on this occasion. We are like the man who had a bear by the tail—we wanted some one to help us let loose. The surgeon who is splitting fees with country physicians or any one who brings him a case will say, "I cannot give you anything. The Society will not allow it." The country doctor will say, "I cannot ask for anything. They would turn me out of the Society." So we are going to be good and sin no more.

Dr. E. H. G. Wilson, Cape Girardeau: In the House of Delegates Tuesday morning I said that amendment as proposed could not be carried out. The reason for it was that the physician who accompanies the patient is entitled to a compensation for his loss of time, etc., you admit. Now you will not be able to control this fee-splitting the way that is worded and I have taken issue with the committee who proposed it because the word "secret" was not inserted and there will always be a way of getting around it. For example, on the twenty-third day of December I brought a patient here to St. Louis for surgical attention. I met a surgeon down town. He took me by the hand and said, "What are you doing here, Wilson"? I said I had brought a patient here. He said, "To whom did you take him"? "To the man he wanted to go to." He said, "What do you get out of it"? I said, "Nothing." He said, "Of course, I cannot split the fee with you, but I will pay you 50 or 33⅓ per cent. if you give the anesthetic." What is that? There is always a way of getting around it. I say if you put that thing down and it is not carried out, it is worse to have rules and regulations on constitution and by-laws than not. The word "secret" should be inserted. It is a disgrace for the press to say that we are fighting this thing. We are not. The country men did not kick against the resolutions, but the way they were worded. I believe the gentleman who proposed it talked to me outside and said that word ought to be inserted. What is going to be done?

Dr. Boone (closing): The subject of the paper was not entirely secret or open division of fees. I want the medical profession to distinctly understand that I am

positively opposed to the secret division of fees in any shape, form or fashion. I think that the general public are well informed that we do not believe in that method of price getting, but I want to call attention to the fact that they do not object to the medical profession having a definite open understanding of the fees, but this is a question of evolution and is going to be evolved according to the ethics of the medical profession.

Many patients say, "Why don't you tell me what the fees of the surgeon, hospital and yourself are going to be"?—one fee to include all charges in the case. The local physician knows what the patient is able to pay. You may say what you please about confiscating the property of the rich, we do confiscate more of their property because we have to; they understand it and as long as it is not exorbitant they don't object. You have to charge them the maximum fee.

I took a patient to the city not long ago, who was able to pay a large fee. I said to him, "I am leaving my practice. You owe me so much for my time and my work. Your hospital charges are so much, if you are there two or three weeks—depending on how long you are there—and your railroad fare is so much. The surgeon will charge you \$500 because you are able to pay that much, your life is worth it and you ought to pay it. He paid it without a word. I took another patient along at the same time and made him pay \$75 for the same kind of operation because he could not pay as much as the other. I cannot always get paid for my work. I started into the profession as a pauper and I have pretty nearly maintained my status. This thing is a question of evolution that has to be met by the general profession, and that is why I brought this paper before you that you might take it up.

Now, the first physician who spoke, brought up a point I want to call to the attention of the profession. It is this, that you ought to select men competent to do the kind of work you want done, not because they are personal friends, not because you can get a fee out of them, not because they have solicited it of you, but because they can do that kind of work—not simply as an operator, but as a surgeon. I have had a great deal of experience with surgical work and I know a man with considerable notoriety in surgery whom I would not trust as a diagnostician in any delicate work. I want to call your attention to the fact that you must pick out the men who know enough to do this kind of work. It is a common practice to say a patient is to go to whomever he pleases. Your relation to the patient demands that you tell him the best man for the work and as nearly as possible what it will cost him in all, so he will know to whom to go.

STEREOSCOPIC RADIOGRAPHY

E. H. SKINNER, M.D.

Radiologist to the Swedish Hospital, St. Luke's Hospital,
Mercy Hospital; Consulting Radiologist to the Kansas
City General Hospital

KANSAS CITY, MO.

The short history of radiographic technic can be compared to the advancements of photography covering many years. The old one plane, flat photographic view has been supplanted by the stereoscopic view thus adding depth to the perspective. The moving picture film has added action to the old still-life picture. And to-day

we have the stereoscopic *x*-ray negatives, and the *x*-ray film of moving viscera practically accomplished.

Stereoscopic radiography presents the body parts in three dimensions — length, breadth and depth — to the observer. It is bound to supplant the former two-plane *x*-ray examination, i. e., the anteroposterior and lateral views of a fractured limb. Stereoradiography permits one to literally look through the anatomic structure. Furthermore, previous to stereoscopic *x*-ray negatives it had been impossible to obtain two-plane views of

Apparatus is required that rapidly shifts the *x*-ray tube and changes the *x*-ray plate between the two exposures. The distance of the shift is usually $2\frac{5}{8}$ inches, called the universal stereoscopic distance, or the average distance between the two eyes, one of the *x*-ray images corresponding to the right eye view and the other to the left eye view. When these two images are combined by means of a stereoscope, either the mirror or prism type, the observer obtains the true image of the length, breadth and thickness of the living anatomy.

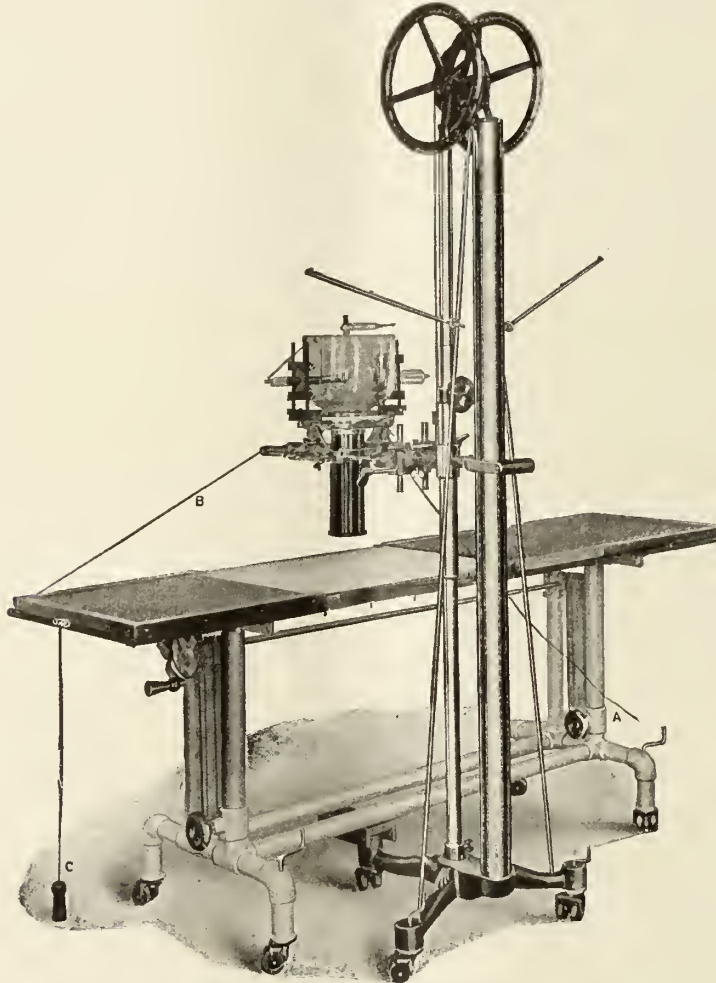


Plate No. 1. Showing stereoscopic table and tube-stand adjusted to it for work in the horizontal position.

the hip, shoulder and trunk. Our idea of depth in these parts had been supplied by the mind's eye of the experienced interpreter. Stereoscopic radiography permits us actually to view all the anatomy in the three dimensions of length, breadth and thickness. *We obtain a painless, bloodless, dissection of living pathology by the stereoscopic x-ray examination.*

There are many simple advantages of stereoscopic radiography over previous methods. Besides the former impossibility of obtaining more than one view of the hip, shoulder or trunk, there has always been much confusion in securing the anteroposterior and lateral views of a fractured limb. The pain and discomfort of changing the position of a leg or forearm has forced us many

times to be satisfied with inferior negatives. The impossibility of obtaining a view in more than one direction of a fractured elbow which had been dressed with a right-angled splint, and many other instances, have precluded satisfactory interpretations from mediocre negatives or from negatives which had been taken with the *x*-ray tube at an angle of convenience rather than at the focus of choice.

Stereoscopic radiography only requires that the body part be placed in a comfortable position between the *x*-ray tube and the plate while two

recognize the advantage of the one fixed position which stereoscopy alone requires.

For the production of stereoscopic negatives three distinct pieces of apparatus are required. The table, incorporating the plate-changing device: the tube-holder, which admits of rapidly shifting the tube from one position to another; a stereoscope for viewing the two stereoscopic negatives.

The accompanying illustration shows an efficient table on which the patient may be fixed in position. The top of the table consists of three

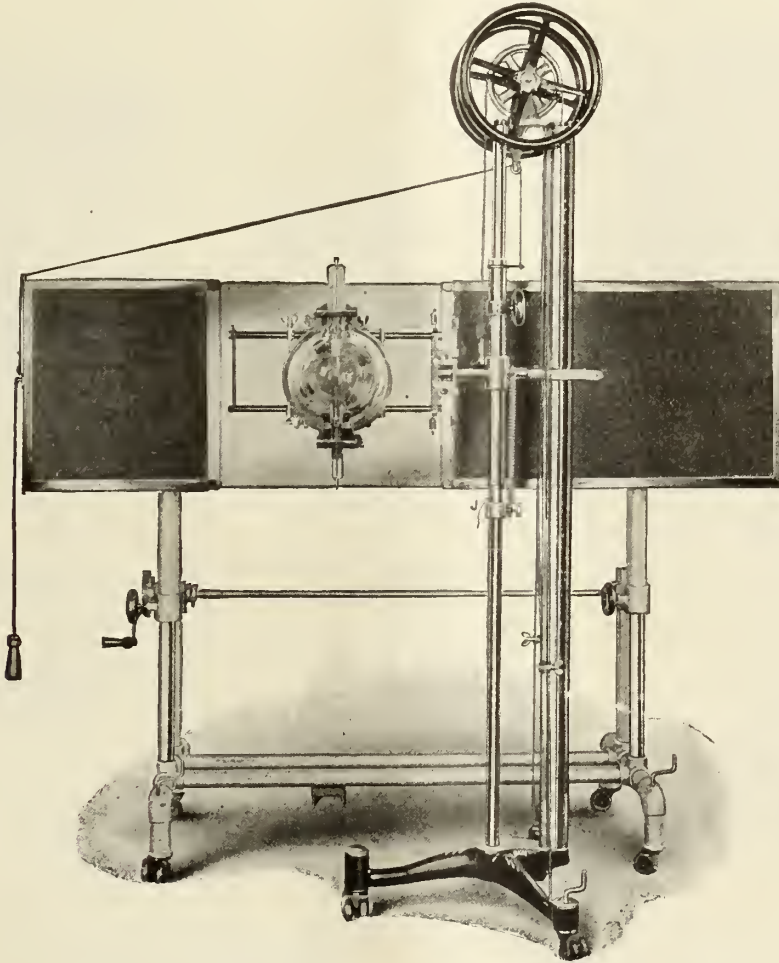


Plate No. 2. Showing tube and tube-stand adjusted for making stereoscopic plate of the chest or stomach with patient in standing position.

exposures are made, without molesting the fixed position of the part. In fact the maintenance of the fixed position is necessary to the correct stereoscopic technic. Positions awkward or embarrassing to the patient are not necessary and the possibility of shadow distortion is minimized. Those who are familiar with the pain or anticipation of pain in obtaining even an antero-posterior and lateral view of the forearm will

sections, the middle one being transparent; the other sections, one at either end, are opaque to the *x*-ray. The pathologic part is placed on the transparent portion of the table. The photographic plates are placed in compartments beneath the top of the table in specially arranged holders, the position of which can be changed by releasing a spring by means of a cord attached. When the plates are placed in the holder one of them is

beneath the transparent window, and the other beneath one of the opaque ends of the table top. When the spring is released after the first exposure, the exposed plate takes a position beneath the other opaque end of the table top and the unexposed plate comes into position beneath the transparent window. This change of plates can be made instantaneously by releasing the spring. This table has an additional advantage in that the top can be adjusted to a vertical position for the purpose of taking negatives of the chest and stomach in the standing position.

angle formed by the two mirrors we view the negative on the right side with the right eye alone, and the negative on the left side with the left eye only. The viewer's mind receives the impression of one image from a fusion of the right and left eye images and the mind's image appears in relief, that is, has length, breadth and depth.

While stereoscopic x-ray work has been discussed for many years and has been successfully pursued by a few research laboratories, it remains for the introduction of simplified apparatus such

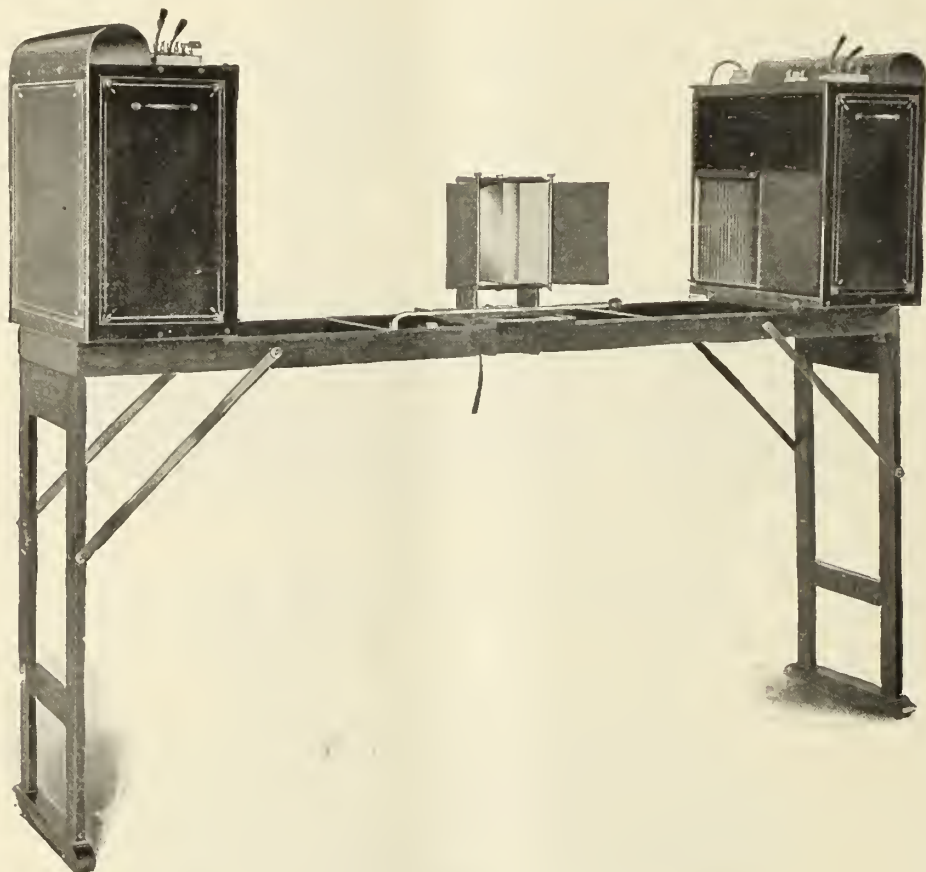


Plate No. 3. Showing the Wheatstone type of stereoscope.

The tube stand illustrated in this article can be adjusted to a uniform fixed relation with the transparent window of the table previously described. A lead glass shield surrounds the tube on a carriage that can also be shifted by the release of a spring to which a cord is attached. The adjustments arrange for the change of angle of the tube focus as well as the shift of the tube the stereoscopic distance.

The Wheatstone type of stereoscope is illustrated in this article. It consists of two mirrors at 45 degrees to the plane of the negative-viewing boxes. Approaching rather closely to the

as is illustrated and described in this article to promote stereoscopic radiography to practical adoption and general use.

1018-1020 Rialto Building.

CHETWOOD, of the New York Polyclinic Hospital, in his new work on *Urology*, says: "The use of salvarsan in urogenital syphilis has been followed by brilliant results and no doubt the introduction of this treatment will in many instances revolutionize the methods adopted and take the place of the older remedies to a considerable degree. It has been found that syphilitic children bear the treatment very well, in spite of the earlier expectations to the contrary."

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EDITORIALS

MEDICAL EDUCATION IN MISSOURI

The report of the Council on Medical Education recently published¹ is a conspicuous example of the trend of the American Medical Association's activities to advance the standards of medical practice and the efficiency of practitioners.

The lax entrance requirements of all colleges in the past, as is true of many to-day, and the loose methods of grading in final examinations, clothed many persons with authority to treat the sick, although their perceptive and moral character should have stamped them as unfit to enter so serious a profession. It is wholly due to the little recognized truth that the profession of medicine attracts chiefly those whose natural proclivities lead them into paths that open the largest possibilities for altruistic labor: persons endowed with nobility of character, a broad conception of ethical behavior and readily capable of self-immolation and self-sacrifice beyond the ordinary instinct toward Samaritanism. That the majority of medical practitioners possess these traits in large degree is attested daily in every part of the civilized world. The materialistic or business side of the profession is the undeveloped side, except in some few conspicuous instances, for the spirit of gain for gain's sake cannot control the spirit to do good and save life; the two are antagonistic. The great majority of physicians are towers of moral rectitude and cannot be swerved from righteous behavior by the glitter of gold.

The individual of cramped intellect is usually a moral coward and should never be permitted to enter a medical college much less obtain the badge of authority to tamper with the health of the people; and the man of low moral strength, be he ever so intellectual, should meet the same bar at the door of medicine. It is from these two classes that the greatest number of fee-splitters, abortionists, advertising quacks, false witnesses, solicitors and the pretended experts are drawn. And into their net of evil practices fall many others whose spirits chafe under the galling yoke, once it has been fastened on them. Hence, the entrance requirements of medical col-

leges should be as strictly cognizant of the moral proclivities of the applicant for matriculation as they are of his educational qualifications; indeed, the moral character should be more closely scrutinized than the intellectual standard.

With the high standard of mental development now demanded by the best schools (to be raised still higher on Jan. 1, 1914), it is not likely that men of low perceptivity will gain entrance to first-grade schools, and most certainly they will not be permitted to cheat themselves into the belief that they can graduate; to-day the student who reaches the senior class in Class A plus or Class A schools has earned the right to graduate and will be graduated unless serious flaws develop unexpectedly. It is in the low-grade schools that we find the unfit matriculant most numerous, and from these schools he is the most often graduated. It is this class of schools that must be frowned down and utterly eradicated, because the organized profession is held responsible for their existence; whether justly or unjustly we will not attempt at this time to discuss.

There is another phase of this question that must not be lost sight of, and that is the interest of the public. Hitherto the public has been entirely overlooked, except as material for graduates to work on after "commencement," and the people seem to have forgotten, if it ever occurred to them, that they had any right or interest in or the power to question the kind of men admitted to medical colleges and the sort of medical education they acquire; this is in spite of the fact that medical education probably touches the individual more closely than any other branch of education, for it reaches from the beginning to the end of his existence. It also exercises a controlling influence on the well-being of the state and nation since the efficiency of hygienic and sanitary laws depends on the quality of medical education provided by the institutions sanctioned by the state.

Until the Council undertook to gather accurate information concerning medical education there was absolutely no reliable data extant, even as to the number of colleges. The Council was organized in 1905 and immediately set to work; in 1907 its first classification was published. A rapid decrease in the number of medical colleges and decided improvement in the equipment of others followed the issuance of the report. In 1910² the second classification was issued, and thirteen colleges closed that year; while in 1912, when the Council's third classification was completed, fourteen more colleges ceased to exist. Some few new schools were created in this period, but the total number has steadily decreased from 162 in 1906 to 106 in 1913.

An interesting feature of the record is the fact that Class A and Class B colleges which

1. Jour. A. M. A., Aug. 23, 1913.

2. It was in this year that Flexner's report on medical education in the United States and Canada was published.

closed were usually merged with other schools, while Class C schools, with three exceptions, became extinct.

Studying Missouri's record in the last report (1913) we find eight colleges, as follows:

In Class A plus: Washington University; University of Missouri (giving a two-year course only).

In Class A: St. Louis University.

In Class C: American Medical College (National University of Arts and Sciences) St. Louis; College of Physicians and Surgeons, St. Louis; Eclectic Medical University, Kansas City;³ Kansas City Hahnemann Medical College; Ensworth Medical College, St. Joseph.⁴

In 1913 these eight schools graduated 158 students. With the population in Missouri already provided with one physician to every 546 people, there seems to be no real demand for eight medical colleges in Missouri, for it is reasonable to suppose that most of the graduates, especially from the low-grade schools, will endeavor to practice in this state where they have better chances of passing the examining board than in other states, being fresh from their college studies. But the last report from the state board⁵ shows 71.4 per cent. of failures of the College of Physicians and Surgeons graduates, 33.3 per cent. of Ensworth, 33.3 per cent. of National University of Arts and Sciences and 17.3 per cent. of the American Medical College. Any medical college showing such high percentage of failures ought to be severely censured by the examining board, and its equipment, teaching facilities and requirements for graduation rigorously investigated. In contrast, we note the 53 graduates of the St. Louis University and the 26 from Washington University all successfully passed the examination.

THE INTERNATIONAL CONGRESS ON SCHOOL HYGIENE

On August 25 one of the greatest congresses in the world's history began a six-day session at Buffalo, N. Y. This was the International Congress on School Hygiene. It was the fourth meeting of this body. The first congress was held at Nuremberg in 1904, the second at London, 1907, the third at Paris, 1910.

It will require no strain on the imaginative powers of persons interested in the improvement of the physical and mental vigor of the nation to predict that the children of to-day will constitute a generation of strong, vigorous and clean men and women, mentally and physically, far superior to other generations.

3. This school is reported not in good standing with the State Board of Health and the examining boards of twenty other states.

4. It is reported that the Ensworth Medical College will close after graduating the present class in 1914.

5. Published in this issue.

The first attempt to improve children in school life was made in New York City in 1892, when the sanitary superintendent appointed one medical inspector. Since that time the movement has rapidly developed, and now many cities have regular medical inspection, although we cannot say the work is thoroughly done, because it is still limited to certain schools, grades or conditions. Only in Massachusetts is the inspection state-wide and compulsory.

With the growth of knowledge of the prevention of disease, and the constant demonstration of relief and swift progress of children after correction of defects, medical inspection must in time become as much of school routine as vaccination and school attendance. The state has declared its right to protect itself against ignorance in its future citizens, and compels children to attend school between certain ages; it also provides free the means to obtain an education. With the knowledge that from 75 per cent. to 90 per cent. of children at school age are defective, that these defects are correctable or relievable, and that failure to apply proved methods for such correction and relief not only entails needless economical waste, but works injustice and serious injury on the children, medical inspection of all children and the enforcement of hygienic and sanitary laws in the construction and maintenance of school buildings and their surroundings cannot long be delayed.

It is due to the efforts of the organized medical profession that the instruction of the people in preventive medicine, hygiene and sanitation has become so general. Almost every day the science of medicine brings new truths to light concerning the prevention and alleviation of disease, and these truths are published far and wide for the benefit of the people. Of course, we speak here of the true physician who realizes that he owes a duty to his profession, and do not refer to that kind of medical doctor who would first fatten his coffers ere he gave mankind the benefit of his discovery; as a rule that sort prove mere charlatans and their "discoveries" worthless fakes.

School hygiene and the medical inspection of school children will do more toward developing the vigor, strength and vitality of the nation than any other endeavor, hence, the Congress at Buffalo is, indeed an auspicious gathering. The Congress had a larger number of committees officially appointed to represent the nations and commonwealths than any previous meeting, and the attendance was larger than at any other session, there being over 2,000 registered at Buffalo. More than 200 papers were read, covering every phase of school life. Twenty-four foreign countries sent representatives to the meeting, and all but three of the states of the Union were officially represented by committees appointed by state and municipal authorities or quasi-

public institutions. We deeply regret to state that Missouri is among the three states not officially represented.

COUNTY SOCIETY ORGANIZATION

WRIGHT AND DOUGLAS COUNTIES ORGANIZED

On Tuesday, August 5, Dr. E. J. Goodwin, secretary of the Missouri State Medical Association, and Dr. J. H. Elliott of West Plains, counselor of the 27th District, held a meeting with the Wright County physicians at Mountain Grove and perfected a medical society of the physicians in that county.

The meeting was held in the City Hall of Mountain Grove, and was called to order by Dr. Goodwin, who stated the purposes of the meeting and the good of an organization to the Wright County physicians. Dr. A. C. Ames was elected temporary chairman and Dr. E. J. Butzke, secretary.

After adopting the constitution and by-laws, a permanent organization resulted in the election of Dr. R. M. Rogers of Mansfield, president; Dr. H. U. Dougherty of Mountain Grove, vice-president; Dr. E. J. Butzke, Mountain Grove, secretary-treasurer; Dr. John A. Fuson of Mansfield, delegate, and Dr. R. A. Ryan of Norwood, alternate to the Missouri State Medical Association meeting in 1914.

The membership consisted of enterprising and progressive physicians, and we expect some good work from them in the future, and that soon all the legal practitioners of the county will be members. Following are the charter members: Drs. R. M. Rogers and John A. Fuson of Mansfield, Dr. R. A. Ryan of Norwood, Drs. J. A. Peyton, H. U. Dougherty, A. C. Ames, E. J. Butzke, E. L. Evans and John J. Evans of Mountain Grove.

On Wednesday, August 6, Drs. Goodwin and Elliott went to Ava, in Douglas County, where they formed an organization of the Douglas County physicians, with a membership to begin with of nine physicians. Those nine physicians are all enthusiastic regarding the future of their society, and expect to soon have all the legal practitioners of Douglas County as members of their society.

From Ava, Drs. Goodwin and Elliott went to West Plains, to be present at the Howell County Medical Society, which held its regular bi-monthly session on Thursday, August 7. The physicians gave a noon luncheon at the Arcade Hotel in honor of Dr. Goodwin, and at 2 p. m. they met in the K. of P. Hall, while the ladies were taken in automobiles to see the sights of the country about West Plains.

While at the session of the society the time was given over to Dr. Goodwin, who gave an

address on the work and benefits of the American Medical Association, and advice to the society regarding its general welfare and benefits accruing to its members.

HICKORY COUNTY MEDICAL SOCIETY ORGANIZED

The physicians of Hickory County have organized a county medical society and applied for a charter of affiliation with the State Association. This is the culmination of a movement started last spring to organize the physicians, but some difficulties were encountered due to lack of understanding as to the requirements to be met and also because of the inability of a sufficient number to meet on a specified date. However, in August eight physicians got together and adopted the constitution and by-laws, elected officers and made application for a charter. The members are: Drs. H. C. Brookshire, Hermitage; R. C. Nevins, Wheatland; T. D. Wrinkle, Pittsburg; Geo. C. Losey, Almon; C. V. Steward, Elkton; J. W. Murray, Quincy; W. U. Hodges, Weaubleau; John W. Clark, Cross Timbers.

The physicians of Hickory County are to be highly commended for their progressive spirit and their determination to be identified with the organized profession. There are no railroads in this county and the roads are not yet up to the ideal standard that we all hope will be realized when the enthusiasm in this direction, created by the "Good Road Days" has been translated into solid bottomed highways.

The officers of the society are: Dr. H. C. Brookshire, president; Dr. R. C. Nevins, secretary; Dr. J. W. Murray, treasurer.

EDITORIAL NOTES

ST. LUKE'S HOSPITAL, St. Louis, will erect a \$200,000 addition to its buildings. This will increase its capacity about 50 per cent. The new building will be 40 by 128 feet.

DR. ROY O. LIEUALLEN of Mercer has been appointed assistant physician at State Hospital No. 2, St. Joseph, to succeed Dr. A. H. Vandivert, resigned. Dr. Vandivert will enter private practice at St. Joseph. Both are members of the association.

J. W. FENTNER, a chiropractor at Springfield, was found guilty of practicing medicine without a license recently and fined \$50. The prosecution was conducted by the Greene County Medical Society through its attorney, Mr. T. J. Delaney.

Rebman & Company, publishers of New York City, were awarded the gold medal for the best medical publications.

ARMOUR & COMPANY of Chicago were awarded the gold medal by the International Congress of Medicine at London recently, for their digestive ferments.

THE Mississippi Valley Medical Association will hold its 39th annual session at New Orleans, October 23-25. A trip to Panama has been arranged following the meeting, for the benefit of the members and their friends. Particulars may be had from the secretary, Dr. Henry E. Tuley, Louisville, Ky.

CARROLLTON has the opportunity of securing ground for a public park free of expense to the city, and sentiment among the authorities seems to favor accepting the proposition. A tract of land containing about five acres has been offered to the city for park purposes. It should by all means be accepted. The Carroll County Medical Society might well take cognizance of this offer and adopt resolution urging the city to seize the opportunity to give the people a free park for recreative and social enjoyment.

A CONFERENCE of the officers of state institutions was held on July 31, in conformity with a law passed by the last state legislature. The meeting was held at Fulton under the auspices of the State Board of Charities and Corrections. The conference convened in rooms at the Missouri School for the Deaf and elected Dr. M. O. Biggs, superintendent of State Hospital No. 1 at Fulton, chairman, and Mrs. Waggoner of Columbia, secretary of the Board of Charities and Corrections, secretary. Various phases of institutional work were discussed and a plan outlined for a uniform system of bookkeeping and record-keeping for the institutions.

THE American Association for the Study and Prevention of Infant Mortality will hold its fourth annual meeting at Washington, D. C., November 14-17. The subjects to be discussed include: Eugenics; Pre-Natal Care and Instruction of Mothers; Problems of Infant Hygiene and Infant Feeding; Standards of Training for Infant Welfare Nursing; Continuation Schools of Home Cooking; The Relation of Vital Statistics to Plans for Social Betterment; The Relation of Plans for the Conservation of Infant Life to the General Ideals of Conservation. The sessions will be held in the Hotel Willard. Information and circulars may be had from Dr. Philip Van Ingen, secretary, 125 E. 71st Street, New York City.

OBITUARY

PAUL GERVAIS ROBINSON, M.D.

Dr. P. G. Robinson, a graduate of the Medical College of the State of South Carolina, 1856, and for many years one of the most prominent physicians of St. Louis, died at his home in St. Louis, August 22, aged 79. He was a veteran of the Civil War, for many years dean of the Missouri Medical College, and later emeritus professor of the principles and practice of medicine in the Medical Department of Washington University. He retired from active practice several years ago, but during his professional life he was an ardent supporter of the medical society and of the highest standards of medical practice.

PHILIP SCHOLZ, M.D.

Dr. Philip Scholz of St. Louis died August 1 as a result of injuries received by being struck by an automobile when alighting from a street car in front of his office. He sustained a fracture of the skull and internal injuries, and lingered for several days. Dr. Scholz was born in New Minden, Ill., and settled in St. Louis over fifty years ago. He was a graduate of the St. Louis College of Physicians and Surgeons, 1889. He was a member of the St. Louis Medical Society, the Missouri State Medical Association and a fellow of the American Medical Association.

CORRESPONDENCE

LETTER FROM EUROPE

THE LONDON CONGRESS

We have packed away our bronze medals, which, as members of the Seventeenth International Medical Congress, we wore with pride from August 6 to 12. Among the seven or eight thousand physicians present, there were at least seven or eight from St. Louis. These included Bliss, Schwab, Hyndman, Huelsmann, Elbrecht, Stauffer, Allison, Taylor and George Dock; the latter read one of the leading papers in the symposium on diabetes. And besides, we found here in London our old St. Louis friend, Dr. Kenneth W. Millican, who is now associate editor of the *Lancet*, and who had us all out to his attractive home to partake of "scotch and sandwiches," as he put it. It was like old times.

Really, London did herself proud in the way everybody pitched in to make the Congress a success. It was a surprise to us to see how interested everybody was in the affair; it was in no way confined to the medical profession; from cabinet minister to bus conductor, all joined in to make the foreign visitor feel at home. Every

newspaper featured the meetings; there were pages printed daily and the man in the street discussed spirochetes and bone transplantation with the same fluency that they spoke of the latest cricket match or the races. Even society was interested, and such places as Dorchester House, Apsley House and Lansdowne were thrown open to the visiting doctors. Of course, these parties were limited, and not all that desired were able to secure the special tickets necessary for admission. But there was always something: if you missed Mr. Waldorf Astor's garden party at Cliveden you might nevertheless get in to Lord Steathcona's soiree. And not only was all London handed over to you, but the surrounding country as well. There were excursions to Stratford and Brighton and Cambridge and Oxford and Bath, and even to far off Cardiff. There were twenty official dinners and any number of unofficial luncheons. It is a wonder, now that it is all over, that London has any food or drink left.

And besides all this, there were the papers and addresses. As there were twenty-six sections and some fifty to a hundred and fifty papers to each section, the number of titles presented ran up into the thousands; therefore, we will leave these for the reviewers to struggle with. It might be said in passing that the addresses at the general sessions that attracted the most attention were those of Ehrlich and of Harvey Cushing. Even when we go back to the last Congress, held in London in 1881 (as every speaker did), and recall the names of some of the great men present at that time: Pasteur, Virehow, Lister, Koch and many others, we feel that in listening to Paul Ehrlich we are hearing as great a man as was any of those. History will not be stinted for material when she settles down to record the great names of this present Congress for a coming generation.

And then there were the suffragettes to lend an amusing tone to the affair. The first thing that met our eye on reaching Albert Hall for the opening exercises of the Congress was a long procession of *femmes sandwich* walking in a circle about the building and bearing such inscriptions as "The British Government is Murdering Women" and "What do the Doctors Think of the Cat and Mouse Act." Similar notes were written on the sidewalk in French and German. On the last day when Mr. John Burns was making the closing address of the Congress, several demonstrations were started, but the militant ladies would scarcely get under way before being pounced on by about a dozen "bobbies" and plain clothes men and hustled out. That, according to the idea of many, was exactly what these women wanted—the physical contact with the male incident to such a procedure.

The final address of Mr. Burns was one of the features of the Congress, his subject being "The

Relation between Medicine and the State in the Promotion of Public Health." It is the first time that a Minister of State has taken so important a part in a Congress. The *Times*, in a long leader, spoke of it as follows:

"He was in optimistic vein, but was able to justify his confidence in the future by his historical survey of the progress made during the last generation. As was fitting for the head of the Department which is responsible for public health in this country, he dealt largely with the British statistics of mortality and disease, with the progress of registration and notification, and with the increased extent to which recourse may now be had in combating sickness to public institutions and the services of State inspectors and other officials. He pointed to the connexion between the decreased death-rate in England and Wales, especially noticeable in the case of those at the working age, and the increased local expenditure on sanitation and public health, and laid stress on the gigantic economic benefits secured to the State by the saving of many hundred thousands of valuable lives during a single generation. But social reform, directly depending on the lessons of scientific medicine, still had a wide field for extension. It should not be the work nowadays of one country, but rested on an international activity both in discovery and in public administration. Such a Congress as this in London marked a real advance in addition to the common stock of knowledge on matters of health and strengthened the hands of statesmen in dealing administratively with its problems."

And furthermore, in summing up the Congress, the *Times* said:

"The discussions in all the sections have been of far-reaching interest, and the authoritative contributions made by experts from all countries have focussed attention in a remarkable degree, both among medical men and among the public, on the latest conclusions of scientific research and practice. In Sir Thomas Barlow the Congress has had a president who has added to his fame as a doctor by earning golden opinions among all his conferees from the weight he has added to their deliberations, and the geniality and tact he has shown as the central figure in the British welcome which has been extended to the whole world of medical science. In his speech at the closing meeting Sir Thomas Barlow referred to the manifestly increasing influence exerted by the medical profession in public life, and he invited all the members of the Congress, when they went back to their respective countries, to use their power in this respect in the interest of international peace."

Sir Thomas, as a matter of fact, helped a great deal in keeping the Congress before the people instead of making it a star chamber affair. In his opening address he urged the importance of the doctor to the community as follows:

"It is impossible even to enumerate the varied ways in which medicine has cooperated with economics, social legislation, and philanthropy, which we sum up briefly as public health.

The schoolhouse and the scholars, the home of the poor, the colliery and the factory, the dangerous occupations, the smless life, and the mentally deficient, have benefited and will benefit still more by its friendly invasion, and I venture to foretell that not many years hence every department of life and work will be strengthened and purified and brightened by its genial and penetrating influence."

Then there were not only all these speeches and scientific papers and entertainments for us, but there were also the museums and the exhibitions. The former included a Medical Museum, organized by a special committee, and the Museum of the History of Medicine, established by Mr. H. S. Wellcome, which will be a permanent affair. Either one of these was alone worth a trip to the Congress.

All the hospitals were, of course, thrown open to the visitors, and special work arranged for the week of the Congress. Out at Guy's, Sir Arbuthnot Lane removed a large intestine every few minutes. Sir Victor Horsley, young looking, active but modest, did not let anything get by that displeased him in the discussion of brain surgery.

In the medical section Sir William Osler presided and nobody was allowed to exceed the time limit. This was necessary because Sir William took twenty or thirty friends out to lunch and to dinner each day, and the discussions at the table were frequently much more interesting than at the meeting.

This brings us down to a possible discussion of food here in London, which is a delicate subject for an outsider to handle, and especially when one has just come from Paris and the best cooking in the world. I met a man soon after my arrival who had also just come from Paris. I asked him the usual question, "Where do you eat?" "Please don't speak about it," he said. "Don't you see my linen is dirty and that my clothes are unpressed? Also I don't use taxicabs and not even busses if I can walk. And as for food, except for a cup of coffee at the Vienna Café in the morning, I take only one meal a day, and after Paris, I can't go to any place less than Monico's and my dinner there costs me from thirty shillings to two pounds. Therefore, I have no money left for anything else."

Really it is a mystery to me how the English extract every particle of flavor from every article of food they serve. Possibly it requires more art than the production of special flavor which is so easy for a good French chef. One day, forgetting for a moment the English reaction to American humor, I said to an Englishman, "Do you know the only way I can tell the difference here in London between peas and roast beef is that the former roll off my knife?" "Oh but I say old chap," he expostulated, "It's not good form to eat peas with one's knife."

But to come back to the Congress: as I said before, London did it up in good shape—for London. Of course, there were disagreeable circumstances due to the red tape that the average Englishman cannot get away from, and this made it very difficult at times for a man who could not speak the language, as well as annoying for one who could. For instance, it was announced in the program that members of the

Congress could visit the Zoological Garden on Sunday afternoon, tickets at Albert Hall. Now the Zoo is a big place, and if the whole Congress went out in a body it wouldn't have disturbed the monkeys. But those who finally found Regents Park and walked about two miles to the garden were promptly told that they could not get in without their tickets. And back they had to walk, mad all the way through, if they hadn't taken the forenoon to go down to Albert Hall and get the formal pasteboards. One man I met was so angry that he wrote a letter to the King about it, but I think he tore it up the next morning.

If we didn't kick against England and the English just a little we wouldn't be typical Americans. This country being so nearly like our own in some ways and still so different in others is apt at times to get on our nerves. As one man expressed it, "I don't get angry in Naples when I order Scotch whisky and it isn't good, for there I expect it to be rotten; but when I order Scotch here and get good whisky and then have it absolutely killed as far as my palate is concerned, because I can't get any ice with it, that is what makes me mad."

To sum up the Congress, I think that every American will carry back with him a great respect and kindly feeling for his brother practitioner in London and for the thoughtful courtesy that has been extended to him during this great meeting. I only hope that America will some day be able to square itself by having the Congress at home.

R. L. T.

MISCELLANY

REPORT OF PUBLIC HEALTH, LEGISLATION AND ECONOMIC CONDITIONS OF THE SOUTHWEST MISSOURI MEDICAL ASSOCIATION*

A. H. MADRY, M.D., AURORA, MO.; W. R. SUMMERS, M.D., CONWAY, MO., AND G. WILSE ROBINSON, M.D., KANSAS CITY, MO.

We, your committee, beg leave to submit the following report: The attempts on the part of the medical profession within recent years to educate the public in matters of public health are bearing fruit. The lay mind is much more receptive than formerly to suggestions coming from the profession. Many organizations have been born for the purpose of teaching the people how to keep well, and the evident results of the work of these various educational agencies have

* Read at the spring meeting of the Southwest Missouri Medical Association, Springfield, March, 1913.

been to aid materially in clearing from the public mind the underbrush of prejudice which has so long obstructed the progress of the profession in the attempt to bring the people to a realization of the fact that physicians are not actuated by selfish motives when they advise in matters of public health, and when they insist on the strict enforcement of medical laws and recommend to legislative bodies laws for the protection of the people's health and the conservation of human life. While there are obvious evidences of improved relations between the people and the profession, we still meet with many obstacles when we attempt to get our recommendations incorporated into the laws of the commonwealth. These obstacles are not all placed in our path by the ignorance of the people. Many of them are placed by the powers that prey on the sick and by those who profit because of the ignorance and credulity of the people in matters medical. We wish to refer briefly to some suggestions made in the report of this committee one year ago. In that report it was suggested that the State Board of Health should have sufficient authority and adequate funds for the proper enforcement of the medical laws now on the statute books. The enforcement of these laws cannot safely be left in the hands of the county attorneys of the state, as we find that quite frequently these officials are unfriendly in their attitude toward the medical profession, and if they do not openly refuse to prosecute, they quite frequently are lacking in zeal in the prosecution of violations of these laws. In that report, reference was also made to the present methods of management of our state eleemosynary institutions.

For many years the physicians of the state, with few exceptions, have considered these institutions with indifference. The management has chiefly been in the hands of the lay politicians of the party which happened to be in power. Many good men have been appointed to fill medical positions in these institutions, but it is also a well-known fact that many others have received similar appointments, whose appointments would not have been endorsed by the State Medical Association or by any of the various component societies thereof. The members of the local boards have been appointed as a reward for political activity without any relation whatever to their fitness for the position. We do not mean to cast any aspersions on the honor, integrity or good citizenship of the men who have constituted these boards. They have in the main been good men, but in many instances they knew nothing whatever about the management of the institution over which they were to exercise control. Quite frequently in the employment of nurses to care for the unfortunate inmates of these institutions, a knowledge of, or fitness for the work which they were expected to do was not considered, but em-

ployment given to men and women because of their political endorsements or affiliations. We all know that this is wrong. We also know that these appointments should be made because of merit and fitness for the duties, and that politics should not weigh at all either for or against any person who seeks official appointment or employment in institutions of this kind. The employees should be under civil service. Physicians who are especially fitted for the work should be offered the prospects of permanency in their appointments. The medical profession of the state should demand a voice in the control and management of these institutions so that they will be administered in such a manner as to give the maximum of benefit to the inmates.

Medical Service to the Poor.—All physicians expect to do a certain amount of charity practice, but it is not just to the profession that they should continuously for years give of their services to those of our citizens who are not able to pay anything for such service. There should be some method devised by which the family physician could be paid for his service rendered to the worthy poor.

Criminal Abortion.—The laws should also be so amended that the woman in the case be made a competent witness in the prosecution of the abortionists of our profession, so that it will be impossible for those who are guilty of such practice to hide behind the skirts of their partners in crime.

Medical Economics.—The question of medical economics is one of greatest importance. There are several phases of this subject that deserve careful consideration by the members of our profession. The phases to which we shall refer briefly are the supply and demand of physicians, the division of labor by the profession, and the question of income. In the thirty years from 1870 to 1900 the population nearly doubled; in the same years the number of physicians more than doubled. In fact it is about 212 per cent. of its former number; hence the average clientele of the physician has decreased so that in 1910 it is 572 persons per physician. The number of graduates per year has gradually increased, until 1904 there were 5,744 medical graduates. In the same year there were 28,142 students attending medical college. There were 4,483 graduates in 1912 and 18,412 students in medical college, giving approximately 1,200 less graduates and 10,000 less students than in 1904. The vast amount of work that has been done by the profession along the lines of prevention of disease has necessarily decreased the demand for physicians. The fees for medical work have increased very little excepting for some surgical and certain special work. During the last ten years the cost of living has increased very considerably, and the average physician has witnessed a grad-

ual narrowing of the margin between his earnings and expenses until in many instances the margin is entirely wiped out. This has encouraged many of inferior qualifications even to reduce the fee which they charge as an inducement to the public to employ them. This has naturally lessened the regard of the public for their ability. For such physicians it is only a question of time until the public will refuse to employ and pay them the very small price for which they offer their services. The public naturally considers that a man is the best judge of his qualifications, and if he estimates his qualifications at a low figure the public is inclined to take him at his word and believe that his services are of an inferior quality, or he would not be disposed to sell them so cheaply. It has been estimated that the physician should have a clientele of one thousand under present conditions. It has been further estimated that with the present increase of population and the decrease of graduates, it will require about thirty years before the ratio of physicians to population is normal. It seems to us that the solution of the problem is, less physicians with better qualifications and better pay for their services. Physicians should increase the fees for their services rather than decrease them. Many young men just entering the practice of medicine are induced to enter the specialties, as they believe that these offer them better opportunities for making money than does general work, and so the specialties are becoming crowded and many men are entering same who are unfitted by experience and qualifications to give superior service in the specialty which they enter. It is our opinion that no man should enter a specialty until he has had at least ten years in general practice so that he has acquired a good, thorough knowledge of general medicine; otherwise he lowers the character of work done by the specialty which he enters, and it is these men of inferior qualifications in the specialties who are offering their services cheaply in order to get the public to employ them. The men of inferior qualifications, both in general medicine and the specialties, are the ones who are doing contract practice at inferior prices. We consider contract practice as debasing to the profession and especially to the men who do it. The men who do this class of work are cheating themselves and their brother practitioners.

The prevention of insanity is a matter in which every physician of the state should be interested. It is a well recognized fact that at least 50 per cent. of the insanity is caused by preventable conditions. Many of those who are in our institutions have been returned one or more times because of relapses. In order to reduce the relapses to a minimum there should be follow-up nursing. Every county in the state should have a properly qualified nurse to visit patients after their return to their homes to inves-

tigate the environments, and in so far as possible to correct conditions which were responsible for the attack. This will do much toward educating the public in the cause and methods of preventing insanity and materially aid in the prevention of relapses. In so far as the enforcement of present laws and the enactment of new laws will prevent insanity, the people of our state should receive the benefits. Heredity plays a considerable part in the causation of insanity. The progeny of the marriage of improper persons constitute a considerable percentage of our insane, as well as of our criminal and defective classes. We believe that there should be some legislative restriction in order to prevent the marriage of the unfit. The tubercular, epileptics, feeble-minded, insane, habitual alcoholics and syphilitics, unless cured, should not marry and perpetuate their kind. More than 50 per cent. of the male population, usually while young men, has been infected with gonorrhea. Tens of thousands of women lose their health and lives, and many children are made hopelessly blind because of this condition. No gonorrheic individual should be permitted to marry unless it has positively been demonstrated that he has fully recovered. We believe that there should be a law compelling all applicants, male or female, for a marriage license, to submit to a thorough examination, and if either of the applicants be an unfit person, a license should be refused.

Feeble-Mindedness.—By thorough scientific investigation it has been demonstrated that at least 50 per cent. of the school children in New York City are feeble-minded. With slight variations, these findings would apply to the schools of any large city in the United States. Atypical children likewise abound in the schools of the small towns and country districts. These children in justice to themselves, the normal child, or the state cannot be educated in the same classes and in the same manner as the normal child, and separate schools must be established for their proper scientific education. All feeble-minded children should be made wards of the state, so that their education, habits and training may be supervised by the state in order that they may attain the best possible development. It is a well-established fact that a surprisingly large percentage of our people are of such low mentality that they are incapable of living what we term a normal life. It is also a well-established fact that these conditions are transmissible. Such people should under no circumstances be permitted to marry until they are in some manner sterilized so that we are sure they will be the last of their race and never become parents of children like themselves. It is possible by the very simple operation of vasectomy to permit these people to marry and live their lives and yet beget no children. It is only by legislative enactment that we

can effect such a solution of this very important problem.

School Inspection.—School inspection has demonstrated its merits in the schools of our large cities. It should be state-wide in its application. It is only by proper medical inspection of schools that we can have knowledge of the feeble-minded children, or that we can properly control trachoma, tuberculosis and other contagious and infectious diseases.

Care of Alcoholics.—It has been positively demonstrated that habitual alcoholism is a disease, and that the person who periodically indulges in alcohol to excess is insane. There is such a close association of alcoholism to insanity in its manifestations that further investigation will doubtless convince us that all those who use alcoholic beverages to excess are insane and should be so treated. Kraepelin says that about 80 per cent. of all insanity is directly or indirectly the result of alcoholism. A state hospital for the treatment of alcoholics should be established, and any person, who, because of alcoholism, becomes a public menace or a public nuisance, should be sentenced for an indefinite period to remain under treatment in the state hospital until cured. We also recommend that a psychopathic hospital be built by the state for the treatment of persons who are in the incipient stage of insanity. In such a hospital persons who are not actually insane, but who are threatened with insanity, could be treated, and in many instances the insanity averted. It has been established that the brains of all criminals, excepting the accidental, show anomalies which do not differ in character or kind from the anomalies of the brains of the insane. A proper investigation of any penitentiary will prove that a considerable percentage of the inmates are actually insane. A properly qualified commission should be provided to determine regularly the physical and mental condition of our criminal classes. All those showing abnormal mental states should be transferred to a hospital for the criminal insane, where they can be treated as sick persons and not as malefactors. Many of these persons have physical abnormalities, which can and should be cured. We believe that crime should be considered a disease, and that all criminals should be regarded as sick persons until a proper investigation establishes the fact to the contrary. We do not mean to infer that because criminals are sick the public should not be protected from their criminal tendencies. An insane criminal is more dangerous than a sane criminal, but if a person commits a crime because of physical or mental abnormalities, it is the duty of the public to attempt a cure of these abnormalities, and if possible to replace the abnormal physical and mental condition with the normal, so that, likewise, normal tendencies may perhaps replace the abnormal. The professional

medical expert who sells his testimony to the highest bidder has brought much disgrace and merited criticism on the profession. We recommend that in all cases in which insanity is pleaded as an excuse for the crime, that the trial judge appoint three physicians to examine the defendant. Their report should be made to the trial judge and they should be paid a stipulated sum by the state for their examination and report. If the defendant is found to be insane he should not be tried for his crime, but should be sentenced to a hospital for the criminal insane and should remain there until a properly qualified commission pronounces him to be of sound mind.

Uniform Licensing Laws.—All persons who undertake the diagnosis and treatment of disease in any manner whatsoever should be compelled to submit their qualifications to a common board, and should not be licensed to practice until they have passed a proper medical examination.

Sex Hygiene.—It is estimated that 75 per cent. of the male population of our country is, at some time during their lives, infected by some sort of a venereal disease, and an astonishingly large percentage of our feeble-mindedness, insanity and pauperism is caused by syphilis. Tens of thousands of women annually are reduced to a state of invalidism, mised, and die because of gonorrheal disease. We are not justified in longer treating these conditions with indifference. Our people must be educated in matters of sex hygiene and in the dangerous nature of these diseases. All venereal diseases should be reported, and any person guilty of infecting another person with a venereal disease should be treated as a criminal and punished as such. A law should be passed making it a felony for any person to enter the marriage relation while in the infective stage of a venereal disease.

Milk Inspection.—We cannot overestimate the importance of pure and clean food. The inspection of the milk-supply of our state should be so extended, and the laws against the offering for sale of improper and dirty milk so vigorously enforced, that the ultimate consumer will be insured a pure, clean quality of milk. A clean, pure milk-supply will do much toward the prevention of our large and unnecessary infant mortality. We recognize the fact that you cannot make and keep a people well by legislative enactment, but much aid can be rendered the conservation of the public health by proper laws and a vigorous enforcement of same. Then, too, laws are educative to the public. A properly educated public will give the physician, who is the real conservator of public health, an intelligent and hearty cooperation, whereas those who are not educated in the cause and prevention of disease are antagonistic and will not cooperate. In conclusion, we heartily endorse the following state-

ment: Medicine is beginning to be less a curative and more a preventive science. From an art of curing illness it has become a science of health. Modern medicine seeks to eradicate rather than palliate weakness and morbidity. The coming physieian will be largely an advisory functionary, aiding his elientele in the conservation of personal and racial strength and health.

PROPRIETARY MEDICINE VS. HEALTH
LEGISLATION

The following from *The Journal of the American Medical Association* of recent date is another warning to physicians to prevent them from being foolish in the future. A similar bill was before our legislature last winter, but failed to pass:

IN THE OPEN AT LAST

A bill has been introduced into the Illinois legislature by Mr. Hurburgh to regulate objectionable advertising. It is aimed specifically at the "lost-manhood" type of advertisement and makes such advertising a misdemeanor for which both the advertiser and the publisher may be punished. The bill has been favorably commented on by the decent newspapers of the state and has just passed the senate by a vote of 35 to 0. It is opposed, of course, by the quacks and those whose interests lie in that direction. Here is a circular letter sent out by a company that owes its fortune to careless and uncritical members of the medical profession. It is being sent to the druggists of the state of Illinois and deserves a careful reading:

We respectfully call your attention to Illinois S. B. No. 481 by Mr. Hurburgh designed to stop the advertising and sale in Illinois of a large number of valuable remedies for the treatment of certain diseases. This Bill, *introduced by the doctors*, is occasioned by the fact that *the advertised remedies are equally as successful as the doctors in the treatment of the diseases named* and at infinitely less cost to the patient; thus depriving the doctors of what they consider their perquisites. There is no demand by the people for this legislation and it is only an entering wedge for the doctor, who claims a monopoly of all healing and would, if he could prevent the sale of all medicines except on a prescription furnished by him.

This bill does not affect us, as we do not manufacture and have no interest in such remedies but we believe it should be opposed because it offers a precedent for worse legislation along the same lines.

Trusting that you will write your Senators and Representatives at once, asking them to vote against legislation of this nature which will benefit only one class of individuals at the expense of the whole people, we remain

Sincerely yours,
THE ANTIKAMNIA CHEMICAL COMPANY.

We have italicized certain portions of this letter for the purpose of emphasizing the present attitude of the Antikamnia Chemical Company. This company, as we have already said, is an expensive monument to the poor judgment of the

medical profession and to the venality of a portion of the medical press. For a good many years, a certain proportion of the profession has not been able to satisfy itself that the Antikamnia Chemical Company was not only antagonistic to the ideals of medicine but also antagonistic to the profession itself. The letter we have just given should be sufficient to convince even the most charitable. By it the company places itself squarely on record, and by lining itself up with the "lost-manhood" quacks, it admits every allegation THE JOURNAL has made regarding it for the past ten years.—*Jour. A. M. A.*

MISSOURI STATE BOARD OF HEALTH—ST. LOUIS
EXAMINATION, JUNE 16, 17, 18, 1913

Colleges	Number Examined	Number Passed	Number Failed	Per Cent. Failures
American Medical College.....	23	19	4	17.3
Natl. Univ. of Arts and Science, St. Louis.....	3	2	1	33.3
Barnes Medical College.....	1	1	0	0
Chicago College of Med. and Sur. College of P. & S., St. Louis.....	12	12	0	0
College of P. & S., New York....	1	1	0	0
Drake University.....	1	1	0	0
Ensoworth Medical College.....	3	2	1	33.3
Eclectic Med. College, Cincinnati.	1	1	0	0
Hahnemann Med. College.....	1	1	0	0
Howard Med. College, D. C.....	2	2	0	0
Hering Med. College, Chicago....	1	1	0	0
Jefferson Med. College.....	1	1	0	0
Johns Hopkins University.....	1	1	0	0
Meharry Med. College.....	2	1	1	50
Missouri State Univ.....	1	1	0	0
Rush Medical College.....	1	1	0	0
St. Louis University.....	53	53	0	0
Tulane University.....	1	1	0	0
Univ. Medical College, K. C.....	22	19	3	13.6
Univ. Hosp. Med. College, Tenn..	1	1	0	0
University of Arkansas.....	1	0	1	100
University of Illinois.....	2	2	0	0
University of Iowa.....	1	1	0	0
Univ. of Med., Coll., Ohio.....	1	1	0	0
Washington University.....	26	26	0	0
Totals.....	160	144	16	10

DOCTORS LICENSED IN MISSOURI ON RECIPROCITY SINCE
MAY 1, 1913

Name	Reciprocating State
James Alexander Logan.....	Illinois
C. M. Condon.....	Iowa
James W. Huffman.....	Indiana
Ray Mercer.....	Illinois
W. W. Murphy.....	Illinois
Barney Brooks.....	Maryland
Garfield Arthur Reutter.....	Nebraska
Helena EleanorENZ.....	Kansas
H. M. Hittner.....	Kansas
Fred Henry Morley.....	Kansas
Walter Ernest West.....	Iowa
Clement Edwin Laws.....	Nevada
Archie H. Lillard.....	Georgia
C. C. Rambo.....	Colorado
P. Sherlock.....	Iowa
L. D. Harmon.....	Nebraska
Francis M. Barnes, Jr.....	Maryland
J. Wesley Faust.....	Kansas
T. W. Hughes.....	Georgia
Harry L. Ratliff.....	Kansas
D. T. Polk.....	Kansas
T. C. Borden.....	Kansas

SOCIETY PROCEEDINGS

BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met in Dr. Marion Dillon's office, in Warsaw, on July 30, with Dr. E. H. Gist, vice-president, in the chair; the president, Dr. J. P. Van Allen, of Cole Camp, having telephoned his regrets in not being present on account of business and missing the train.

A letter from Dr. J. W. Clark, of Cross Timbers, asking for a transfer card to the Hickory County Medical Society, which was just being organized, was read and his request granted.

The case of diseased bone in the femur, presented at the April meeting by Dr. Dillon for clinical inspection was brought up again and thoroughly discussed. This patient had been under the care of Dr. J. A. Logan, successor to Dr. Dillon's practice, and had been operated on in Kansas City. The patient had developed other complications, making it of peculiar interest.

Dr. Logan referred to a case of remarkable interest; that of a man having been thrown from a horse and dislocating the shoulder and elbow joints, with fracture of the humerus at the lower third, and tearing loose the biceps at its insertion; also fracture of the radius and ulna at the upper third, giving plan of splinting and treatment. The patient recovered nicely, with some stiffness of the elbow joint; union of fractures perfect.

Dr. Savage moved that Dr. J. A. Logan's application for membership be accepted. Seconded and unanimously carried.

The secretary referred to a case that was operated on, assisted by Dr. Haynes, of complete inversion of the uterus of 17 years standing, which was protruding through the vagina. He tried every means to reduce the inversion with no result and finally, as a last resort, ligated the uterus with a rubber band as close to the neck as could possibly be reached, and resected it at that point. The operation was a complete success but the patient finally died of a dysenteric condition that had reduced her vitality from a woman of 200 pounds to that of not more than 110. That patient had borne all the agonies of the lost for all those years, rather than give up and have a physician do something for her or let her condition be known. I had told the family that it was only a mere chance to save her and that it was the only thing that we could do. After the operation she was perfectly free from the terrible dragging pain she had endured for years, but her physical condition was not sufficient to bring about reaction. She was 63 years of age and had been a hard working woman all her life. We learned from her history that this uterus had been in this extruding condition the greater part of the time for more than two years prior to the time we first saw her.

Drs. Jones, of Lincoln and Van Allen were booked for papers but being unable to be present, their work will be looked for at the next regular meeting on October 15.

After a thorough discussion of several important cases the meeting closed in due form. Those present were: Drs. E. L. Rhodes, Lincoln; T. S. Reeser, Cole Camp; E. H. Gist, Frisco; J. A. Logan, Fairfield; E. F. Haynes, H. G. Savage, Marion Dillon and J. R. Smith, Warsaw.

J. R. SMITH, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville at 1:30 p. m., August 14. The following members were present: Drs. Adair, Chaffin, Crawford, Overholser, Ramey, Triplett and Tout. The program

was one of especial interest and every member took part in discussing it.

Dr. M. P. Overholser read a report of a case of "Cavernous Sinus Thrombosis," which was very interesting on account of its clinical history.

Dr. R. D. Ramey read a paper on "The Road to Health," in which he emphasized proper breathing as a prime element in health.

Dr. W. F. Chaffin presented two very interesting clinical cases, a father and son. The father was afflicted with a peculiar nervous and circulatory disease and the son showed the effect of a hereditary influence as a result of the father's disease.

The county superintendent of schools requested the society to elect one of its members to read a paper at a meeting of school boards in Harrisonville Aug. 27-28. Dr. J. S. Triplett was elected to read a paper on "Preventive Medicine." The committee appointed to get up a bulletin on the fly nuisance, reported the printing and posting of the same. They were posted in all offices, business houses and public halls in the county.

H. S. CRAWFORD, M.D., Secretary.

CHRISTIAN COUNTY MEDICAL SOCIETY

The Christian County Medical Society met at Ozark, August 12, at 10 o'clock, the president, Dr. W. B. Wassan, in the chair.

After the reading of the minutes of the previous meeting, the following program was rendered:

"The Operation for Cataract as Made by Col. Henry Smith, of Amritsar, India," by Dr. Flavel B. Tiffany, Kansas City.

"Appendicitis, Its History and the Ideal Way of Treating It To-Day," by Dr. G. W. Russell, Springfield.

"Secondary Anemia, with Report of Cases," by Dr. C. E. Roseberry, Springfield.

There was a good attendance and the interest manifested was encouraging. All officers were present.

F. H. BROWN, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

The regular meeting of the Daviess County Medical Society met with Dr. J. D. Dunham, Pattonsburg, on the evening of June 10, at which time his good and noble wife entertained the doctors at an elegant six o'clock dinner. The doctors are always glad to meet at the Dunham home because of its hospitality and all members join in wishing them a happy career.

Those who attended were Drs. W. E. Schmid, St. Joseph; C. B. Clapp, Moberly; M. A. Smith, D. F. Hannah, J. D. Dunham, T. N. Foster, N. M. Wetzel, A. G. Minnick, Frank Hodges, F. V. Frazier and Anna McClung.

Subjects were presented by Drs. M. A. Smith, J. D. Dunham, T. N. Foster and N. M. Wetzel for study and discussion.

Dr. Schmid, of St. Joseph, lead in the discussion and covered the field of cancer and ulcers in a masterful way.

Dr. C. E. Clapp, of Moberly, opened up some new fields of thought and made a very interesting and instructive talk on the subjects presented.

The Daviess County Medical Society is making an honest effort to study carefully certain diseases in order that, as practitioners and family physicians, they may give their clientele service second to none in the state. Teachers, ministers and the business world all recognize the necessity of having regular meetings to freshen their intellects and to open up new fields of activity and service. Yet many doctors are to-day practicing medicine who have not affiliated themselves with the county society and who seldom if ever attend a medical meeting. Some families say it does not mat-

ter whom we have for our family physician. Is your family physician a member in good standing of his County Medical Society?

The next meeting will be held at Jameson, Oct. 14, 1913. An interesting program has been arranged.

N. M. WETZEL, M.D., President.

FIFTH DISTRICT MEDICAL SOCIETY

The Fifth District Medical Society held its second meeting at Lancaster, August 21 at 2 p. m. Fifteen physicians were present from the three counties comprising the district and an instructive and pleasant meeting was had. The program consisted of the following:

"Phylaeogens," by Dr. W. B. Sisson, Kakoka.

"Enterocolitis," by Dr. H. E. Gerwig, Downing.

"Report of Case of Mercurial Poisoning," by Dr. A. E. Platter, Memphis.

"Cholera Infantum; What Is It?" by Dr. W. A. Potter, Lancaster.

Paper by Dr. A. L. Davis, Arbela.

"Autointoxication," by Dr. J. R. Bridges, Kakoka.

"Epidemic Cerebrospinal Meningitis," by Dr. H. C. Finch, Hitt.

HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met at 2 o'clock, p. m., August 1, the president, Dr. T. C. Richards, in the chair.

Members present: Drs. Lewis, Moore, Benham, Champion, Kitchen, Hawkins and Watts.

Dr. Richards presented a case of fracture of the humerus in a little boy.

Dr. Moore gave an interesting lecture on the "Etymology of Vesical Stone Diagnosis and Enlarged Prostate."

Dr. Kitchen and Hawkins invited the society to meet with them at Glasgow, Friday, September 5, and by vote of the society it was so ordered. Dr. Moore was requested to continue his discussion on "Symptoms of Stone and Treatment of Enlarged Prostate" at the next meeting.

The Board of Censors reported favorably on the applications of Drs. Samuel C. Vaughn, New Franklin, and Dr. Merrill N. Smith, Fayette. By unanimous vote they were duly elected to membership.

After a very interesting session the society adjourned to meet at Glasgow, September 5.

C. W. WATTS, M.D., Secretary.

JOINT MEETING OF LACLEDE AND PULASKI COUNTY MEDICAL SOCIETIES

The Laclede County Medical Society and the Pulaski County Medical Society met in joint session at Cave Lodge on the Gasconade River, July 18. It was an ideal spot for a midsummer meeting and the occasion proved highly interesting and most enjoyable to all who attended. Dr. C. H. Neilson of St. Louis delivered the principal address which was well received and generally discussed.

SCHUYLER COUNTY MEDICAL SOCIETY

Schuyler County Medical Society held an open session on the evening of August 21 at Lancaster. The people took advantage of the occasion to hear a popular lecture on cancer by Dr. F. J. Lutz, of St. Louis. His address was preceded by a paper on "School Hygiene," read by Dr. A. E. Platter of Memphis, Scotland county. Both lectures were well received. The county school teachers were in session on the same day and attended the lectures in a body.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met at Chaffee April 7, in the offices of Drs. Sample and Finney. There were present Drs. Tate, Westcoat, Cannon, Sample, Finney, Dangherty and Underwood. Dr. Finney was elected temporary chairman in the absence of the president.

Dr. Cannon read a paper on "The Health of Scott County," which elicited a general discussion on hygiene, sanitation and preventive medicine.

Drs. Haw and Mayfield were on the program to read papers but neither was present.

The next meeting will be held at Morley on the first Monday in October.

G. S. CANNON, M.D., Secretary.

SCHOOL FOR HEALTH OFFICERS, CONDUCTED BY HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Beginning this fall Harvard University and the Massachusetts Institute of Technology are to maintain in cooperation a school for Public Health Officers. The facilities of both institutions are to be available to students in the school and the Certificate of Public Health (C. P. H.) is to be signed by both President Lowell and President Maclaurin.

The object of this school is to prepare young men for public health work, especially to fit them to occupy administrative and executive positions such as health officers or members of boards of health, as well as secretaries, agents, and inspectors of health organizations.

It is recognized that the requirements for public health service are broad and complicated, and that the country needs leaders in every community, fitted to guide and instruct the people on all questions relating to the public health. To this end, the instruction of the new school will be on the broadest lines. It will be given by lectures, laboratory work, and other forms of instruction offered by both institutions, and also by special instructors from national, state, and local health agencies.

The requirements for admission are such that graduates of colleges, or technical and scientific schools, who have received adequate instruction in physics, chemistry, biology, and French or German, may be admitted to the school. The medical degree is not in any way a pre-requisite for admission, although the Administrative Board strongly urges men who intend to specialize in public health work to take the degree of M.D. before they become members of the School for Health Officers.

The Administrative Board which will conduct the new school is composed of Professor William T. Sedgwick, of the Massachusetts Institute of Technology; Professor Milton J. Rosenau, of Harvard; and Professor George C. Whipple, of Harvard. Professor Rosenau of Harvard has the title of Director and the work of the school will be under his immediate supervision.

WRIGHT COUNTY MEDICAL SOCIETY

Dr. E. J. Goodwin, Secretary of the State Medical Association, and Dr. J. H. Elliott of West Plains, counselor of the Twenty-Seventh District, called the physicians of Wright County to meet at Mountain Grove, Aug. 5, 1913. The following physicians met at the city hall and organized, calling this society the Wright County Medical Society:

Drs. Erastus S. Evans and John J. Evans, Manes; Herzon U. Dangherty, Ernest J. Butzke, Dan W. McGee, James A. Peyton, A. C. Ames, Mountain Grove; Robert

A. Ryan, Norwood; Robert M. Rogers and John A. Fuson, Mansfield.

Dr. A. C. Ames was chosen temporary chairman and Dr. E. J. Butzke, temporary secretary.

The following officers were then elected: Robert M. Rogers, president; H. U. Daugherty, vice-president; E. J. Butzke, secretary-treasurer; consors, Drs. D. W. McGee, one year; R. A. Ryan, two years; J. A. Peyton, three years; delegate to state association meeting, Dr. J. A. Fuson; alternate, Dr. R. A. Ryan.

The temporary censors reported all the doctors present to be eligible to membership and all had paid their dues. The dues will be \$4.

Dr. E. J. Goodwin read a copy of constitution and by-laws, which were changed to suit our conditions and then adopted.

Dr. R. A. Ryan made a motion that four regular meetings be held each year and called meetings when necessary. The meetings are to be held on the first Thursday of the month as follows: November, Mount Grove; February, at Mansfield; August, at Norwood, and May, at Hartville; the meetings to begin at 1 o'clock. Four members present will constitute a quorum. The annual meeting will be held in November.

The doctors of Wright county have long felt the need of a medical society and their interest in an organization of this kind could not have been shown better in any other way than by the large attendance and the work they did at the first meeting. All was harmony and good fellowship, and they seemed anxious for the next meeting to come.

Dr. E. J. Goodwin of St. Louis gave a short talk and some good sound advice to the doctors. There is no question about society benefits; the doctor ought without fail to attend the medical society meetings and hear how his fellow practitioner is fairing. As a rule the doctor goes home and says in his own mind, "Cheer up; the other fellow is having as hard a time as I am." He finds too, very often, that Doctor So and So is not such a bad fellow after all. We cannot help but get some new ideas from every meeting and become more thoughtful and helpful with our patients. The patients also wnl feel better toward us for having gone to the society meeting, knowing we have sought to learn something to relieve their sufferings.

Dr. Elliott of West Plains added cheer to the meeting and gave some very sound advice. If you wish to know how the medical profession regards him in his own city, visit him and you will feel like staying at West Plains to practice medicine.

E. J. BUTZKE, Secretary.

THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 North Dearborn Street, Chicago, Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

DIGIPURATUM AMPULES.—Each ampule contains 1 Cc. of a digipuratum solution, equivalent to .1 gram

digipuratum. Knoll & Co., New York (*Jour. A. M. A.*, Aug. 23, 1913, p. 568).

DIGIPURATUM SOLUTION FOR ORAL USE.—Vials containing 10 Cc. digipuratum solution, each Cc. representing .1 gram digipuratum. Knoll & Co., New York (*Jour. A. M. A.*, Aug. 23, 1913, p. 568).

TETANUS ANTITOXIN.—For description of Tetanus Antitoxin see N. N. R., 1913, p. 218. H. M. Alexander & Co., Marietta, Pa.

ACNE VACCINE.—For description of Acne Vaccine see N. N. R., 1913, p. 221. Schieffelin & Co., New York.

PERTUSSIS VACCINE.—Pertussis Vaccine is a Bacillus Bordet-Gengou Vaccine. Schieffelin & Co., New York.

MENINGOCOCCUS VACCINE.—For description of Meningococcus Vaccine see N. N. R., 1913, p. 223. Schieffelin & Co., New York.

COLI VACCINE (POLYVALENT).—For description of Bacillus Coli Vaccine see N. N. R., 1913, p. 221. Schieffelin & Co., New York.

GONOCOCCUS VACCINE (POLYVALENT).—For description of Gonococcus Vaccine see N. N. R., 1913, p. 223. Schieffelin & Co., New York.

PNEUMOCOCCUS VACCINE (POLYVALENT).—For description of Pneumococcus Vaccine see N. N. R., 1913, p. 224. Schieffelin & Co., New York.

STAPHYLOCOCCUS VACCINE (POLYVALENT).—Schieffelin & Co., New York.

STAPHYLOCOCCUS ALBUS VACCINE (POLYVALENT).—Schieffelin & Co., New York.

STAPHYLOCOCCUS AUREUS VACCINE (POLYVALENT).—For description of Staphylococcus Vaccine see N. N. R., 1913, p. 225. Schieffelin & Co., New York.

STREPTOCOCCUS VACCINE (POLYVALENT).—For description of Streptococcus Vaccine see N. N. R., 1913, p. 226. Schieffelin & Co., New York.

TYPHOID VACCINE.—For description of Typhoid Vaccine see N. N. R., 1913, p. 227. Schieffelin & Co., New York.

REFORM IN MEDICINES

CLINICAL EFFECTS OF "NATURAL" AND "SYNTHETIC" SODIUM SALICYLATE.—A critical study of the literature, a pharmacologic investigation, and comprehensive chemical analyses, have shown that the claim for superiority of the "natural" sodium salicylate over the "synthetic" kind, is not warranted by the evidence. While these investigations all indicate that no difference exists between the two varieties of sodium salicylate, it was agreed that clinical tests were required definitely to decide the point. Accordingly the Council with the aid of clinicians of recognized standing with hospital facilities at their disposal undertook a comprehensive clinical comparison of the effects of the two kinds of sodium salicylate. The results of this investigation have been compiled by Dr. A. W. Hewlett and they show that "natural" and "synthetic" sodium salicylate are indistinguishable so far as their therapeutic and toxic effects on patients are concerned (*Jour. A. M. A.*, Aug. 2, 1913, p. 319).

REEXAMINATION OF LACTOPEPTINE.—Lactopeptine was examined by the Council on Pharmacy and Chemistry about six years ago and found to be little more than weak saccharated pepsin and did not contain the other ferments which were claimed by the manufacturers to be present. Because of claims made recently by the exploiters that Lactopeptine contained not only pepsin but also pancreatin, diastase, lactic acid and hydrochloric acid, an examination of Lactopeptine, purchased here and in England, was undertaken by the Council. The reexamination failed to demonstrate any diastasic or pancreatic action and also demonstrated

the absence of free hydrochloric acid. Tests indicated the presence of lactic acid, probably in the combined form, and also of pepsin. The investigation reaffirms that, in digestive activity, both the Lactopeptine purchased in the United States and that bought in England are essentially weak saccharated pepsin (*Jour. A. M. A.*, Aug. 2, 1913, p. 358).

ELIMINATION OF DIGITALIS BODIES.—R. A. Hatcher studies the rate at which digitoxin and ouabain are eliminated from the circulation. He finds that digitoxin and ouabain leave the mammalian circulation very rapidly after their intravenous injection. He believes that the digitalis bodies are not fixed in the tissues, but that they diffuse rapidly and are then eliminated (*Jour. A. M. A.*, Aug. 9, 1913, p. 386).

MORLENE.—Morlene is a worthless goiter and obesity nostrum sold by the Interstate Drug Company, Cleveland, Ohio. The firm's letters are signed by F. F. Finch who at one time was engineering a scheme by which physicians who prescribed certain products said to be made by the Wade Chemical Co., Chicago, would receive half the profit on the goods sold. Morlene is sold under the claim that, when used externally, it "will reduce goiter, tumors, thick neck, double chin, enlarged joints, inflammation, bust and waist line." Examination in the A. M. A. Chemical Laboratory indicated that the composition of the specimen examined was essentially: alcohol (by weight) 53.32 per cent., soap 3.61 per cent., sodium iodid 12.01 per cent., sucrose (cane sugar) 12.87 per cent., water and undetermined matter (by difference) 18.19 per cent. Physiologic experiments showed that the sodium iodid in Morlene was not absorbed when the preparation was rubbed on the skin. Hence, Morlene when used as directed (by external application) cannot produce the effects claimed (*Jour. A. M. A.*, Aug. 16, 1913, p. 505).

HASTY GENERALIZATIONS.—The search for "specifics" has become so keen partly because of notable success in a few instances and the competition between drug manufacturers has become so great that there is at present an overshadowing danger from this sort of reckless medication that it may in the end react unfavorably on chemotherapy. An illustration of the insufficient evidence on which new therapeutic measures are based is given by Salkowski's experiments which indicated that cephalin, when administered, is stored in the brain. While in a limited number of experiments the retention of but 5 per cent. was indicated, Salkowski considers this sufficient to advocate the use of cephalin in progressive paralysis and other cerebral affections. As a result the use of cephalin will receive an impetus, as yet unwarranted by the evidence (*Jour. A. M. A.*, Aug. 23, 1913, p. 603).

SUICIDE WITH MERCURIC CHLORIDE.—Recent newspaper accounts have given the impression that the ingestion of corrosive sublimate ensures not only certain, but also painless death. As the dread of pain incident to suicide keeps many from taking the fatal step, the public should be acquainted with the fact that there are few modes of suicide more painful and in which the agony is longer drawn out than in death from mercuric chloride (*Jour. A. M. A.*, Aug. 23, 1913, p. 606).

THE COMPOSITION OF NOSTRUMS.—Himalya, the Kola Compound, though advertised as "Nature's Great Specific for the Cure of Asthma," is reported by the chemists of the North Dakota Agricultural Experiment Station to be "a weak hydro-alcoholic solution of potassium iodid, flavored with peppermint and licorice and colored with caramel." While the name would indicate that the active ingredient of the nostrum was kola, little appeared to be in the preparation.

Mrs. Bradley's Face Bleach is claimed to remove "moths, tan, freckles, pimples, blackheads" and to prevent "wrinkles, oiliness and aging of the skin." Accord-

ing to the Druggists' Circular it contains anhydrous magnesium sulphate 45.7 per cent., sodium chloride 9.7 per cent., mercuric chloride 23.6 per cent., water 23 per cent.

Dr. Felix Gouraud's Oriental Cream was analyzed by the state chemists of New Hampshire and found to consist of "approximately one-half ounce of calomel suspended in a short half-pint of water." More recently essentially the same composition was found by the chemists of the Connecticut Agricultural Experiment Station.

Cat-Er-No, Soules, according to the North Dakota Agricultural Experiment Station is an aqueous solution of menthol with just enough of a vegetable drug to give it a color.

Ely's Liquid Cream Balm, sold as a "remedy for catarrh, catarrhal deafness, hay-fever, cold in the head," according to the Connecticut Agricultural Experiment Station "appears to consist of liquid petrolatum with small quantities of thymol and menthol."

Dr. Boskano's Cough and Lung Syrup, a "new remedy for the positive cure of consumption, coughs, colds, etc." was examined by the Kansas State Board of Health and also by the North Dakota Agricultural Experiment Station. The latter reports that it "appears to be made from an inferior grade of honey, syrup of tar, chloroform, alcohol and morphin." The morphin was found not to be in solution, but deposited on the sides of the bottle. Yet the mixture did not bear a "shake" label.

Véritable Grains de Santé du Docteur Franck are claimed to prevent "typhoid congestions" and various other woes which arise from impaired intestinal functions. Examined in the Connecticut Agricultural Experiment Station, the grains were found to be essentially aloes.

Dr. Bloomer's Catarrh Remedy comes in cigarette form. Analyzed by the North Dakota Agricultural Experiment Station, it was found to contain "chamomile flowers over 50 per cent., powdered cubeb, fennel seed, and a few other powdered vegetable substances."

Schenek's Pulmonic Syrup, a "70-year-old Remedy for Consumption, Coughs, Colds, Diseases of the Lungs and Respiratory Organs," was analyzed by the Connecticut Agricultural Experiment Station. The report states "This remarkable remedy for consumption is essentially a wintergreen-flavored mixture of saccharin syrups, 96.4 per cent. of the solids consisting of sugar. It is hard to believe that the virtues of this material rest in the 2.7 per cent. of undetermined solids (possibly vingar of squills). . . ."

Dr. J. H. McLean's Tar Wine Lung Balsam "Will cure coughs, colds, bronchitis, consumption, asthma, throat and lung troubles." According to the state chemists of North Dakota analysis of this preparation would indicate that it "is nothing but a weak syrup of tar, containing about 15 per cent. by volume of ethyl alcohol."

Dr. Gum's Pain Expeller, having been declared misbranded in Colorado some time ago, was examined in the North Dakota Agricultural Experiment Station. The examination showed opium and alcohol. Camphor and capsicum were also present (*Jour. A. M. A.*, Aug. 23, 1913, p. 615).

LACTOBACILLINE LIQUIDE.—Lactobacilline Liquide has not been submitted to the Council on Pharmacy and Chemistry by its exploiters and no examination of the claims appears to have been made by competent investigators. Some years ago P. G. Heinemann examined Lactobacilline powder and Lactobacilline tablets and found the claim made for them unreliable. In view of this the claims made for Lactobacilline Liquide should be viewed with suspicion (*Jour. A. M. A.*, Aug. 23, 1913, p. 618).

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EDITOR

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ORIGINAL ARTICLES

EPIDEMIC PUERPERAL ECLAMPSIA?

E. H. MILLER, M.D.
LIBERTY, MO.

Since commencing the practice of medicine some thirty-eight years ago, I have witnessed some terrible scenes at the sick bed-side — some that made me wish deep down in my heart that I had never chosen medicine as my profession in life, for the effects of many of those experiences have never been erased. Long-continued fevers, accidental and other injuries have made me shudder, when I first approached the patients, at the ghastly sights before me, but none of my cases have so shaken the very foundation of my medical skill, or have so shattered the heart strings of my nervous system as witnessing an attack of puerperal eclampsia. To me the puerperal state at best is always full of doubts and uncertainties, and while I admit its physiological status, yet the termination is so full of suffering and entreaties that I would willingly cast these ends to physiological necessities on the shoulders of some more competent brother practitioner and let him enjoy the fruits of these hours of agony. If you add to this condition the sudden onset of eclampsia, coming, as it often does, like a lightning stroke from a cloudless sky, and like it so often leaving a desolate home and a broken heart, no apology is needed for a paper on this topic of which so little is known and for which so little is often to be done for the relief of the patient. But in writing on this subject I wish to ask why I have practiced during the last fifteen years without seeing a single case, and then in the same county in the same state, among the rich and poor under the same conditions, why I should see six in my own practice and hear of three also in my own practice which I did not see, as I was absent—all within the year 1912? To me this is quite a coincidence

at least, and I offer these cases with a study of the same for your consideration. I would have you remember the causes of eclampsia as given by the best and most noted authors on the subject: Accumulation of urea in the blood; the formation of ammonia carbonate in the system; sudden anemia in the brain, etc. But all agree that eclampsia is the result of the retention in the body of substances that should have been expelled by the excreting organs, mainly the kidneys, but owing to insufficiency of these organs remain stored up in the body. Authors differ as to what effect these retained substances have on the different organs, sufficient to produce eclampsia, some blaming one organ, some another, until we are bewildered and grope blindly as to when to begin the fight. But my observation of these recent cases, so fatal in their termination, forces me to believe that whatever the cause primarily may be, yet the brain receives such an obstruction in its circulatory mechanism that profound anemia follows and which too often is never overcome.

The first question we ask when we have been called to see a case is, "How about the kidneys?" We examine the urine and find albumin of course, especially if there has been over one convulsion. So we begin to eliminate: purgations, diuretics, sedatives, empty the uterus. Do it all and the patient nevertheless goes on down the incline until the bottom is reached—death most frequently. The object of this paper is not to ask how to treat and relieve the sufferer, but to ask for some solution of the cause of eclampsia, and what must be done to prevent it. You say look out for renal insufficiency; eliminate this cause and you will never have eclampsia to deal with.

One noted obstetrician boasted to me that he had had no cases of eclampsia for fifteen years, and that he never expected to have another. I boastingly replied that I had not had one for fifteen years, and although following the same course as well as I could, yet I had seen six in the last year with four deaths, under the most accepted treatment. These cases were not con-

fined to any special time of the year, else we might attribute their occurrence to some climatic influence. They were scattered from early winter to the late fall of the following year; and all of them were in young, robust patients, except one who seemed, however, to be benefited by her pregnancy and until eclampsia set in felt healthy and strong. Three of the six cases occurred during the seventh month of pregnancy; one eight hours after a perfectly normal delivery, and two during full-time delivery. In most cases of nephritis we have distinct prodromes that generally warn us of approaching danger. But in the kidney of pregnancy, if there be such a disease, as in four of the six cases I saw during 1912, not a single symptom is present to make you think there is any deviation from a perfectly healthy condition until the crash comes that usually ends in the death of the patient as in four out of my six cases. There was one prominent condition that existed in all of the patients, namely, increased blood-pressure varying from 30 to 50 mm. Hg above normal, which was very little lowered in the fatal cases, and a slow diminution in the two that recovered. So prominent was this condition that I am inclined to agree with those observers who believe that there is a contraction of the arterial walls and a lessening of the arterial cavities to such a degree that a profound cerebral anemia results which is the probable cause of the seizure. But why the number all at once and that too in such healthy subjects?

I will give a brief history of these cases and let you see if they are as the usual eclampsia cases, and if not what was the cause other than the usual.

Case 1.—Mrs. P., age 24 years, came to my office and asked me if I would attend her when she was confined, which she said would be in about a month. I told her I would and gave her a laxation pill to keep the bowels open. She never had an ache or a pain from that day to the day of her confinement; no edema, headache, or anything abnormal. I was called at the appointed time, and she had a perfectly normal delivery. Eight hours after I had gone home, I was hurriedly sent for to relieve her of convulsions. I found no temperature; good strong pulse; urine albuminous and scanty; blood pressure 165 mm. Hg. She never regained consciousness, although every known remedy was used, and death occurred eight hours after the first symptoms of convulsions.

I wonder had I examined the blood pressure and the urine more often (which had been examined only once) if I would have discovered anything pathological, or whether the poison, whatever it might have been, would have been so thoroughly hidden that I would have advised her as I did. Remember, eight hours after delivery while admiring her baby the convulsion, without any warning whatever, set in.

Case 2.—Mrs. G., age 32, mother of one child 8 years old, a perfect picture of health, came to see me for general advice, when 6 months pregnant. One month later I examined the urine and found it normal. One month after that she came to see me, and as I was absent she consulted a physician in an adjoining town for slight headaches and some swelling in the

lower limbs below the knee, nothing unusual. He prescribed the usual remedies. One week from that time, while laughing and talking the convulsions came. I was sent for and we worked hard to relieve the patient, but the end came in twelve hours in spite of all modern treatment. When I arrived her blood pressure was 155 mm. Hg; urine as expected, full of albumin.

Case 3.—Mrs. L., age 26, never sick a day in her life, as she expressed it, never had a headache, was her boast. When she was 7½ months pregnant I was sent for in consultation and found her just awakening from the effects of a convulsion. Had had three before, during the day previous. Blood pressure 164 mm. Hg; hard, rapid pulse; temperature 102 F.; urine scant and full of albumin. Under treatment, which I will not attempt to give as it is not within the province of this paper, we checked the paroxysms, and in ten days she was delivered, in a semi-convulsive condition, of a dead baby. The mother fully recovered with no permanent kidney lesions.

Case 4.—Mrs. C., age 30, primipara; very nervous from childhood. Any pain would cause a wild convulsive condition since the age of 16. Since I had been her physician all her life, I knew of no organic trouble whatever, only she said she was nervous, although she was the main stay of the household. She became pregnant about one year after marriage, and was very happy in her anticipation of having an offspring. None of the family said a word to me about looking after her until she was 7½ months pregnant. She said she had never felt better in her life. Took plenty of exercise, ate heartily and digested well what she ate. All the secretions were normal, and she certainly looked splendid as compared to her usual looks, but I immediately examined her; found the limbs slightly edematous; kidneys acting freely; face not swollen, but I found blood pressure 168 mm. Hg; urine simply loaded with albumin. I appreciated the condition, explained to her family the gravity of the situation and started to remedy, if possible, the danger; but within four days, while father, husband and doctor were enjoying a banquet, the storm broke loose. Rapid, forced delivery saved her life after weeks of hard fighting, but we lost the baby. This case had pyelitis-cystitis at varied times, and a cerebral lesion that was produced on the tenth day. Paralysis (mild) of the right side; interrupted speech; vision cloudy; and now, four months after childbirth, she has an impaired function on the right side and left eye.

I will not read you further a report of the other cases, but briefly state my deductions from a close observation of all these recent cases; yet I cannot arrive at any definite conclusion as to why this seeming epidemic of eclampsia should have come my way after fifteen years' absence of any signs of any abnormal pregnancies.

I believe that the old ideas of the predisposing and exciting causes of eclampsia as expressed by the old authors have little force to-day.

I believe that the toxemia produced by the pregnant condition by direct pressure on the liver, and a consequent prevention of the same from performing its normal function, so influences the cardiac normal function that we have profound cerebral anemia, outside of the renal insufficiency, and that the blood-state and the cerebral cortex are so involved that the convulsive condition suddenly follows. Why so many cases came so close together I am at a loss to know.

ALIMENTARY INTOXICATION AND ENTERIC INFECTION IN INFANCY*

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Gastro-intestinal disturbances during the first two years of life, owing to their frequency, are always apropos for discussion. This is a bacteriophylic age and it was but natural to blame infection for the majority of these disorders. To dissent from this doctrine would mean, a few years ago, to invite caustic criticism. Clinical experience has taught us, especially as the result of therapeutic endeavor that every time a baby has a green stool infection is not to blame. A few years ago all our efforts were directed to prevent the entrance of bacteria into the babies' organism and thus prevent these disturbances. In large cities more than half of the deaths among infants under the age of 12 months are caused by diarrheal diseases. At the outset it will be stated that the object of this paper is to call attention to the extremely favorable results obtained in recent times from dietetic treatment and to insist that the majority of these cases belong under the caption of intoxication and not infection.

ENTERIC INFECTION

We will first review our knowledge of true dysentery. To begin with, the new-born is extremely susceptible to bacterial infection, and in the past, before the development of aseptic surgery, maternities were hotbeds for cases of sepsis neonatorum. The pathological lesions in these infants have been thoroughly studied. Fatty degeneration of the parenchymatous organs, minute hemorrhages throughout the body and the discovery of the causative organism in the blood are the classical findings. These diseases frequently occurred in epidemic form and ceased with the suspension of deliveries at the maternities. Winckel's disease and Buhl's disease we now know were nothing more than sepsis neonatorum. The new-born was frequently attacked for many reasons: There is the lack of development of the skin, the lymph-nodes are of almost no use at this age in stopping the progress of an infection, the umbilicus is an inviting portal, and the mucosa of the respiratory and gastro-intestinal tubes are extremely pervious to bacteria. Diarrheal stools occupy a prominent position in the clinical picture and may be due to inflammatory processes as the result of infection or to perverted digestive processes as the result of the fever.

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* For the method of preparation of protein milk refer to *Abt, New York Med. Jour.*, Jan. 21, 1911. *Feer, Lehrs. der Kinderheilkunde*, 1911, p. 244. *Brady, Dec. 16, 1911, Jour. A. M. A.*

An intern serving in our maternity hospitals at the present time will have little idea of the above-described condition. The rarity of the condition is very laudatory of the technic of our obstetricians and nurses. Puerperal sepsis and sepsis neonatorum are the same disease. Though the mother may not develop sepsis, her discharges still may infect the infant. Since the same aseptic principles are applied to the care of the new-born as in the operating-room, this one time terror has all but disappeared.

The food has always been suspected as the carrier of the infection. Streptococci from an infection of the cow's udder, colon bacilli from a diarrheal stool, or contamination from a careless dairyman are all possibilities. The prevalent use of certified milk, the frequency of the employment of some form of pasteurization and the spread of knowledge in regard to the necessity of sterilization of all bottles and nipples have very much curtailed the above dangers.

According to Finkelstein, the most frequent cause of infectious catarrhal gastro-enteritis in infants is the grippe. Very often accompanying the diarrhea, symptoms from the upper respiratory tract are present which direct our attention to the true cause. Then again the streptococcus, dysentery bacillus, pyocyanus, proteus and colon bacilli, among many others, must at times be considered. The stools are usually mucopurulent and may contain a small amount of blood; fever is regularly present. The severity of the above symptoms will depend on the virulence of the infection.

The onset of dysentery is acute and is characterized by severe general symptoms; the stools contain blood, mucus and pus. Tenesmus is marked, which is evidence of the involvement of the large bowel. The children may pass through the acute stage only to be menaced by the development of a nutritional disturbance finally leading to atrophy. Anatomical studies show an intense inflammation of the lower portion of the ileum and colon; the lymph follicles are swollen and necrotic, eventually leaving an ulcer to mark their former site. According to Holt, the only bacterium up to the present time that has been shown to be capable of producing dysentery is the bacillus of Shiga. It has been found in all parts of the world and often enough to establish its etiological connection with dysentery. An agglutination reaction of this bacillus with the serum of affected children has repeatedly been shown to be present. He believes the question of contagion is unsettled and if at all communicable, feebly so; also, that when it occurs epidemically, a common origin is more probable than that the disease spreads from one patient to another.

Continental authorities have proved that this same pathological picture may be brought about by the streptococcus of Escherich, the blue bacillus, and by certain varieties of colon bacilli.

These organisms have been cultivated from the stools, and, furthermore, are agglutinated by the infant's blood-serum.

ALIMENTARY INTOXICATION

Alimentary intoxication, only correctly interpreted in recent times, is to be sharply distinguished from enteric infection. Symptoms foudroyant in character may be due to the food itself; bacteria have nothing to do with the condition. These are the cases long described as cholera infantum. In a fully developed case the following symptoms will be present: High fever, collapse, profuse diarrhea, disturbances of consciousness and sometimes convulsions, deep breathing, albuminuria, cylindruria, glycosuria, leukocytosis and great loss in weight. If the prodromata of the condition are recognized, most of the above symptoms will not develop and only fever and dyspeptic stools will be met with.

DIFFERENTIAL DIAGNOSIS

Confronted with an infant in which are present a pronounced diarrhea, we must decide if we are dealing with a food intoxication, an enteric infection or a parenteral infection. In the last condition throughout the disease the diarrheal stools may be a leading symptom and the condition misinterpreted. The character of the stools will frequently help us. In true dysentery, blood, mucus and pus are frequently present in the fecal discharges. Withholding all food for twenty-four hours and administering nothing but water will give us valuable information in regard to the true condition. In dysentery the condition will improve, but the fever will persist, as this necessarily could have only slight influence on the inflammatory process within the bowel wall. In the alimentary disturbance detoxication rapidly takes place, the fever subsides, the delirium ceases and the infant again recognizes the mother. If the infant is very feeble, premature and near the stage of inanition, these favorable symptoms will not be met with, and fever will continue as the result of hunger. The recognition of parenteral infection depends on a thorough study of the whole infant.

THERAPY

In dysentery the initial purge is invariably indicated; in intoxication, owing to the profuse watery discharges, it may be dispensed with. For many years cereal waters have been the routine treatment for these disorders. When the general symptoms improved, small additions of skim-milk were usually prescribed. The time elapsing before the addition of milk varied from two to three days to ten days. This necessarily means a severe handicap to the nutrition of the infant. They become pale, weak and lose very much in weight. The large majority of these infants will withstand the acute symptoms; the problem has

always been to nourish these babies after the acute symptoms have subsided. With the addition of milk to the cereal water, there frequently is a return of the acute symptoms marked by fever and aggravation of the discharges.

During the past few years brilliant results have been obtained by us, both in intoxication and infection, by the use of protein milk, which has a formula of protein 3.00, fat 2.50, milk-sugar 1.50 and salts .50. In enteric infection the food administered, owing to the changes in the wall of the gut, is very liable to bring about an alimentary intoxication which was usually interpreted as a renewal of the infectious process. Protein milk, when properly administered, is not liable to be followed by a relapse. An improvement in the catarrhal symptoms sometimes follow the use of bismuth; opium will relieve pain, tannigen is non-irritating and is indicated at times in the subacute stage. The practice of administering antiseptics to kill off the bacteria in the bowel is a delusion and a snare. Attempts have been made to influence the process by specific therapy; a serum has been prepared to combat infection with the Shiga bacillus, but clinical results have been negative. The use of vaccines have also disappointed. In view of the fact that from the clinical symptoms, it is impossible to decide in the infectious cases which particular organism is at work, the only rational procedure would be the preparation of an autogenous vaccine: the isolated organism would have to be agglutinated by the patient's blood-serum before it could be held responsible.

The technique of the administration of protein milk is briefly as follows: In intoxication, after the first twenty-four-hour water diet, one teaspoonful of protein milk ten times daily made up with 1 per cent. maltose and dextrin; water ad libitum. This amount is increased from 1½ to 2 ounces each day with the improvement of the little patient until 3 ounces are fed for each pound of body weight. In a few days the stools become formed (soap stools) and the percentage of malt-sugar is gradually increased to 5 per cent. The increase of the sugar must commence by the sixth or seventh day. For infants under three months, breast-milk is a *sine qua non*. In the infectious cases, after the twenty-four-hour hunger period, 300 c.c. protein milk, made up with 1 per cent. maltose and dextrin, divided in six feedings, are ordered. Every second day the twenty-four-hour amount is increased until 3 ounces are fed for each pound of body weight. The percentage of sugar is increased as in intoxication. By this method it is possible to furnish the infant with sufficient calories at an early period and avoid a great loss of strength and weight. The danger of a secondary intoxication is reduced to a minimum, owing to the high percentage of the casein and the guarded administration of sugar.

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**SOME CONSIDERATIONS AS TO THE PATHOLOGY
AND COURSE OF SPECIFIC URETHRITIS IN
THE MALE, AND THEIR BEARING UPON
TREATMENT ***

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It has long seemed to me that the current idea of the clinical entity known as specific urethritis was in need of some revision. An attempt to throw some light on this subject can at any rate require no apology.

The popular conception of gonorrhea is, I believe, about as follows: It is a disease, which, after a brief incubation period, sets in near the meatus and travels more or less rapidly backward, until it reaches the cut-off muscle, where for a time at least it is arrested. Some cases never go any further, but in a rather large majority the posterior urethra is sooner or later involved. Prostatitis is to be considered as a complication. The importance of distinguishing between an anterior urethritis and a posterior urethritis is insisted on, and especially it is felt to be important that the surgeon shall do nothing which involves a risk of carrying the disease backward into a previously sound posterior urethra. An anterior urethritis is assumed to involve the entire anterior urethra from the cut-off muscle to the meatus.

Now this conception appears to me to involve a number of assumptions which will not bear a critical analysis. In the first place, I object to the selection of the cut-off muscle as a universally applicable point of division between an anterior and a posterior urethritis. I believe also that the probability that the disease presents an incubation period in all parts of the canal as they are successively involved is generally ignored. I should like also to question the distinction generally made between a posterior urethritis and a prostatitis.

Now, I think I will meet with no objectors when I state that we must assume that the gonococci are active from the very moment of their entrance into the meatus, and that they promptly burrow down among the epithelial cells of the mucosa where they rapidly multiply and extend. They are not on the surface; otherwise they would be washed away in the urine. Over just how many inches of the urethra they are able to extend in the course of twenty-four hours, we have probably no means of knowing, but we do know with what great rapidity the entire anterior urethra as nearly as we can determine becomes involved. We do not, for example, ordinarily hear men speak of a gonorrhea limited to the first two inches of the canal, and yet why should not the process stop at a distance of two or three inches from the meatus as well as at the tri-

angular ligament? We have seen that the microorganisms do not creep back along the surface of the mucous membrane, but burrow their way upward among the epithelial cells. The presence of a sphincter muscle at any point can certainly not retard their progress. Furthermore, the sphincter muscle is not so tight as to in any way impede their progress even if they were creeping along the surface. We know that fluid in the posterior urethra will flow forward without any act of urination and appear at the meatus. When we massage the prostate, the secretion flows forward without impediment, and old men with a prostaticorrhea will sometimes have to wear a handkerchief to collect the secretion. I have personally found spermatozoa in the smear from a urethral discharge, showing that the pus which flowed from the meatus originated in the deep sexual parts and found no difficulty in flowing forward past the cut-off muscle. Just how the two sphincters of the bladder coordinate to retain the urine is not very perfectly understood, but this much is certain, that the compressor urethrae muscle is not normally in such a state of spasm as to alone accomplish that end and contracts only as a voluntary act or in response to some direct or reflex stimulation. That such a muscle could impose any obstacle to the backward progress of a gonorrhea is certainly entirely out of the question and that any such rôle should be attributed to it strikes me as one of the curiosities of medical speculation.

But men say that they occasionally see a case of gonorrhea which does not go back. How can they prove it? It is of course not theoretically impossible that a gonorrhea may cease its backward progress at some point, but it is no more likely to cease it at the triangular ligament than at any other point arbitrarily selected along the canal. What is, however, more probable is that these cases which are said not to go back are simply very mild cases of total urethritis which get well spontaneously and in which the posterior involvement never gives any symptoms that are recognized. Let us grant that a gonorrhea always begins clinically as an anterior urethritis; but just what does this mean? The navicular fossa is the only part of the urethra which is visible to the unaided eye, and it is here, therefore, that any swelling of the mucosa will first be observed. It is here also that a discharge wherever originating must necessarily find exit. As for the subjective symptoms, such as itching, teasing, burning, etc., they are naturally more intense near the glans, for the reason that this region is more richly supplied with sensory nerves. We know that pain originating posteriorly can be referred to the anterior urethra, and pain shortly behind the glans is even a classical symptom of certain lesions of the deep urinary and genital tracts. Furthermore, the posterior urethra is not very sensitive to pain, except that due to

* Read at the annual meeting of the Missouri State Medical Association, St. Louis, May 15, 1913.

mechanical force, as in the passage of instruments. The region can be cauterized through an endoscope, and provided none of the caustic escapes into the anterior urethra, but little discomfort will be experienced even when no anesthetic has been employed. It seems reasonable to suppose that a slight inflammation would also cause but little inconvenience. The symptoms, therefore, both subjective and objective, do not justify the exclusion of posterior involvement in even the earliest of gonorrheas. As for the classical symptom-complex ordinarily given in text-books as characteristic of a posterior urethritis, such as fever, perineal pain and frequency of urination. These are certainly not symptoms of simple posterior involvement, for we see too many cases of outspoken posterior urethritis with a total pyuria in which all of them are absent. These are the symptoms of something else. Fever, to the surgeon spells retention. This symptom-complex means almost certainly that pus is being retained in some remote part of the prostate or seminal vesicles, with consequent tension in the parts to account for the pain, and with resorption to account for the fever. To wait for such a development before venturing a diagnosis of posterior urethritis is, therefore, to deprive our patient of whatever benefits may belong to early diagnosis and treatment.

Turning now to the two-glass test, it has often been remarked, and cannot be too often repeated, that the first urine washes the posterior as well as the anterior urethra. The fact that the second glass is clear, therefore, does not prove the point. What a slender foundation we have, therefore, thus far in our examination for our assumption in any case that we are dealing with a process limited to the anterior urethra! A method of examination which has been suggested is to first wash out the anterior urethra and then allow the patient to urinate. If now the first gush of urine contains even the smallest quantity of pus the existence of posterior involvement is demonstrated. This would appear to be a simple and valuable test, and yet I believe that it is not in very general use. If men would substitute this for the two-glass test, many cases of posterior urethritis would be recognized much earlier than they are, and would receive prompt attention instead of being allowed to go untreated until the third week or thereabouts, when the advent of some complication or exacerbation leaves no longer any room for doubt as to the true condition. Surely when we consider the reasonableness of assuming, on anatomical and pathological grounds, that a posterior will follow rapidly in logical sequence on an anterior urethritis we are not justified in excluding this occurrence on such frail evidence as is furnished by the two-glass test and the absence of symptoms. Posterior involvement must be assumed to be present unless we have definitely proved the contrary

instead of being assumed absent as is the current practice.

Indeed, would it not be more rational to regard gonorrhea even from the early stages as essentially an inflammation of the entire urethra? Such it is certainly destined to become in the overwhelming majority of cases, possibly in all cases, and such it almost certainly is long before the methods of examination commonly in vogue have recognized it as such. This conception might result very rarely in an unnecessary irrigation, but on the other hand, it would bring prompt attention to great armies of gonorrheics, who at the present time are permitted to go practically untreated until the disease has penetrated deeply into important and very sensitive structures. Let us grant that the disease has a period of incubation in the posterior as well as in the anterior urethra. Now it is precisely during the incubation period that local treatment is most effective, as shown by the success of prophylactic injections in our armies. Surely it would then appear rational, knowing that the posterior urethra is almost certainly destined to become ultimately involved, to attempt to treat it as early as possible even during the incubation period, while a clinical diagnosis would be as yet impossible. As for the supposed danger of infecting a previously sound posterior urethra by means of our irrigations, I shall discuss that later under the head of treatment.

There are a few more points as to the pathology of the disease which I should like to discuss. First, let us not forget that the cavity of the bladder is practically immune to gonorrhea. Cases of true generalized gonorrheal cystitis have been encountered, but they are exceedingly rare. The entire bladder becomes injected, studded with punctate hemorrhages and is unable to tolerate more than the smallest quantity of urine. The patient lies on his bed in intense agony passing every few minutes a little urine loaded with pus and blood. That this is a rare disease is fortunate. What has been popularly regarded as a gonorrheal cystitis is merely a posterior urethritis with probably some involvement of the trigonum. The disease may even ascend to the kidneys without at any time attacking the cavity of the bladder. And what makes this the more remarkable is the fact that the bladder mucosa is constantly bathed in gonorrheal pus, as is shown by the occurrence of total pyuria. The pus is secreted about the vesical neck and mixes with the urine in the bladder. But the bladder wall remains unaffected. Incidentally we may remark that it is only when pus is secreted in sufficient quantity for some of it to become detached and mixed with the urine in this manner that our two-glass test really tells us anything.

From the above we gather that in all but the mildest cases of specific urethritis, certainly in

all cases in which involvement of the posterior urethra is ordinarily recognized, the bladder is constantly exposed and owes its escape simply to its own immunity. The measures adopted in treatment, as for example irrigations, cannot therefore increase that exposure whatever may be said of their effect on other parts of the genito-urinary tract.

Now let us consider for a moment the conditions obtaining in the prostatic urethra. Here we have an acinous gland surrounding and discharging its secretion directly into the canal through numerous small openings. These openings bear the same relation to this portion of the urethra as is borne by the follicles and the greater lacunae to the anterior urethra. Now we know that in the simplest form of anterior urethritis these follicles are involved. The micro-organisms follow them up for a variable distance and become lodged in them. The presence of these follicles provides the greatest obstacle to thorough treatment, and is responsible for most of the complications of anterior gonorrhea, such as stricture and abscess. Similarly in the prostatic urethra the mouths of the prostatic ducts are certainly involved. The micro-organisms enter them early and travel along them for an indeterminate distance. We are justified in saying, therefore, that a posterior urethritis is essentially a prostatitis and should be so regarded.

With this conception of the clinical and pathological picture known as specific urethritis, we have a foundation for a rational system of therapy. Permit me to say at the outset that I have no quarrel with those who advocate abstinence from all local treatment during the acute stage of the disease. I should not feel, however, that the method was being properly carried out unless the patient was kept strictly in bed preferably in a hospital. This is not, in civil life at any rate, generally practicable. I have never tried it nor have I had an opportunity to personally observe its results. As for attempting the method while the patient is up and attending to his business, I cannot see that it differs materially from the treatment that many patients give themselves or receive from druggists before their necessities drive them to the surgeon, and the observed results in these cases are not such as to excite enthusiasm. I may say here that it has not been my good fortune to get hold of these very early cases and from conversation with others I infer that the experience of the profession at large is very much the same. We see our cases as a rule, only after the discharge has existed for several days, often for a week or more.

But let us consider the therapeutic indications from the very onset of the disease. Excellent precedents are not wanting for the use of irrigations from the very beginning, and by irrigations I mean irrigations through the entire

urethra into the bladder. Joseph irrigates with a solution of albargin 1 in 1,000 from the very first day. He states that after one or two days the gonococci have in many cases disappeared. I saw a case so treated in his clinic in Berlin, in which the patient was passing a clear urine free from shreds on the fourth day. To accomplish such a result the treatment must, of course, be begun very early. Joseph calls this an abortive treatment, but the term has always appeared to me objectionable. It suggests horrors of terrific reactions from strong chemicals and a much more severe course for the disease in case the abortion does not succeed. But Joseph states that even where he does not succeed in aborting the disease the patient is not injured, but that on the contrary the course of his gonorrhea is rendered milder, and I can testify that at least it is rendered no worse from having personally observed his results in his clinic. The strength of the solution is the same as that used in the routine treatment of later stages of the disease. This should not, therefore, be called an abortive treatment. It is simply early treatment.

And now let us consider the ground of objection taken by physicians to whom I have described this method and which I take it will immediately occur to many. There is danger, men say, in passing the cut-off muscle at this early stage. We may carry the disease back. And yet these same objectors will prescribe a hand syringe with some mild silver preparation, such as argyrol, and send their patient on his way. But if there is danger of carrying the disease back, why in the name of common sense entrust the patient with a hand syringe? Let us grant that the disease may not yet be a total urethritis. Let us grant that it may be limited to some portion of the anterior urethra. It is still no more likely to have stopped at the triangular ligament than an inch or two in front of it or at any other point. Why then risk carrying the gonococci back to the triangular ligament and depositing them at the very threshold of the sacred precinct. From here they can enter the forbidden land unobstructed, of course, and furthermore, these anterior injections not infrequently pass, a part of them at any rate, back into the bladder. Surely if we are going to take a chance of introducing anything into the bladder at all we ought to do so by design and thoroughly. I regard anterior injections as a useful adjunct to irrigations, but used alone they appear to me to be indefensible. They put both patient and physician into a false sense of security. They create the idea that something is being done, and I am sorry to say that they are not infrequently persisted in long after all question of protecting the posterior urethra has very clearly passed. For this reason they appear to me to be responsible for many of the very chronic conditions and distressing complications seen in gonorrhea. If we are afraid

of carrying the disease back, then the only logical thing to do is to abstain from local treatment altogether.

But, as already intimated, this fear of extending the disease by irrigations is in my opinion not well founded. Gonococci are certainly in the posterior urethra before their presence there can be definitely established. But even if we are occasionally ahead of them with our irrigations, what chance is there of actually doing any harm? It is only the cast off bacteria which lie on the surface of the mucous membrane, and most of these are washed out with the urine. If then we wash out the anterior urethra repeatedly with an antiseptic solution such as albargin 1-1,000, how many will still remain to be washed back by our irrigation, and if any, what chance is there that they can successfully implant themselves in the presence of our irrigating fluid. Albargin will kill the gonococci if it can get at them, and it will cause some coagulation of the pus and mucus in which they may be imbedded. They will then be ejected later in the act of urination. Surely a solution which is capable of aborting the disease in the anterior urethra or of preventing its development if used in the incubation period is not going to be the means of implanting that same disease in the posterior urethra. We should, however, always use a solution of this character wherever there is any doubt as to the condition of the posterior urethra and should not use a mere astringent like permanganate.

But, as already stated, I do not believe that many of us often get a chance to attempt the abortion of a gonorrhea in this manner, even if we wished. Our patients come to us as a rule, with a well-established purulent discharge. In this stage also it is quite fashionable to give the patient a hand syringe and a prescription. Keyes, in discussing this method, makes the statement that the fluid almost always forces its way into the bladder, and I have repeatedly seen patients coming to consultation pass a black fluid into the two glasses showing that the last injection at any rate had found no difficulty in passing the cut-off muscle. I believe that almost any patient using this treatment may be counted on at some time to enter his bladder. How then is it more conservative than irrigations? Surely the surgeon is on very insecure ground who contends that it is safer to allow a patient without any previous antiseptic washing of the anterior urethra to inject a dram or two or even a few drops of solution beyond the triangular ligament rather than to himself wash out the posterior urethra thoroughly and in a manner calculated to do some good. The only valid objection to early irrigation which I can see is the objection to all local treatment—namely, that it is irrational to apply an irritant to an acutely inflamed

mucous membrane. This is a phase of the subject, however, which lies beyond the scope of the present paper.

As to technic, it may be said that irrigations should, of course, always be given with tact and gentleness. The anterior urethra should be first anesthetized, not only to diminish the sensitiveness of the part, but also to help relax spasm of the compressor urethrae muscle. Permanganate of potassium is an astringent and may be used when the symptoms are acute and where there exists no question as to the presence of infection behind the triangular ligament. Some silver salt, however, is necessary to effect a cure. The fact that these occasionally cause at first an increase in the discharge need not be disquieting. Suppuration is Nature's method of combating the disease, and a part at least of what we accomplish with our irrigations is an irritation of the mucous membrane whereby it may be stimulated to throw off the infection. The discharge will soon yield to persistent treatment and to get rid of it in this way is certainly more rational than to attempt to lock it up with permanganate.

Let us now briefly consider the posterior urethra. It is here that the gonococcus has its natural habitat and it is in the prostate especially that it makes its long home. I have already outlined the anatomical and pathological grounds for holding that a posterior urethritis and a prostatitis should be conceived of by the surgeon as parts of the same clinical entity. It is not claimed, of course, that the entire prostate is always involved, but a portion of the ejaculatory ducts of the prostate is certainly diseased from the beginning, and I believe that this process generally extends much further into the substance of the gland than is commonly assumed. To wait, therefore, for classical symptoms and for the appearance of pathology which can be recognized by rectal touch before venturing a diagnosis of prostatic involvement, appears to me unjustified. Where there is cloudiness of both glasses, it may be assumed that the prostate is already even rather extensively invaded. This pus is certainly not all of it secreted on the surface epithelium. Where then can it come from unless from the crypts of the prostate? Certainly not from the bladder, for that is not attacked, and yet the patient may present a total pyuria rivaling that of a very severe cystitis. And if it comes from the prostate how much good can simple irrigations in this stage accomplish?

It does not, of course, follow from the above that every case of posterior urethritis should be immediately subjected to prostatic massage, but ichthyol suppositories and hot douches in the rectum are certainly not contra-indicated from the very first. Few would care to massage the prostate in the presence of an advancing inflam-

mation. It is a method of treatment which is not free from danger, and its danger should always be carefully considered. Nevertheless, it is folly to wait until the disease has acquired a rebellious chronicity or until irreparable changes have been wrought in the anatomy of the gland. If the patient's condition has become stationary and the acute symptoms have subsided we may safely begin very gently and cautiously to knead the prostate from the rectum. The first treatments should be merely a gentle but firm pressure continued for a moment on the two lobes of the prostate alternately. Perhaps we do not compress it any more than the passage of a fecal bolus would compress it, but as our treatment is always combined with irrigations, we accomplish more. It is my practice to fill the bladder first with a solution of albargin of a strength of 1-1,000, after which the prostate is massaged and then the patient is permitted to void the irrigating fluid. This may be done at first every other day with a simple irrigation on the intervening days, but as the case progresses a little more force can be used and then it is my custom to prolong the intervals, massaging every third day. When all free pus has disappeared and there remain only shreds the simple irrigations may be dispensed with and the patient need report only twice a week for treatment. Later I cease irrigations altogether and go over to instillations of silver nitrate beginning with a strength of one-half grain to the ounce and advancing to 3 grains to the ounce. The massage always precedes the instillation.

Now as regards the so-called relapses which not infrequently occur in the course of this methodic treatment, it has seemed to me that these are very often not truly relapses at all. A return of the discharge or a return of cloudiness in the urine may in the absence of any other symptoms be interpreted simply as a reaction to treatment and if the surgeon will make smears from time to time he will find in these so-called relapses, that the gonococcus becomes exceedingly difficult to find, finally disappearing altogether. This increased suppuration carries the bacteria out of the crypts and follicles and is often probably necessary to final cure. It should not therefore cause any uneasiness in the surgeon's mind or cause him to alter his therapy. A stage will ultimately be reached where neither irrigations nor instillations are capable of exciting any renewal of the discharge, and until this stage is reached the patient is certainly not cured. Irrigations and not instillations should, however, be employed during the relapses.

Of the complications of specific urethritis I shall not speak nor of the treatment of the chronic stage by means of sounds and endoscopes. It has not been my purpose to write anything like an exhaustive discussion of gonorrhea, for which

the limits of a single paper would of course be altogether inadequate. I have aimed merely to point out what I believe to be the fallacy of certain current ideas and to make a plea for more rational conceptions. Particularly I have aimed to criticize the separation of an anterior from a posterior urethritis, the point of division being always the cut-off muscle. Now the truth is that this muscle owes its reputation largely to its faculty of resisting the injection of fluids into the bladder, and hence has arisen the distinction between anterior and posterior irrigations. To meet this distinction in therapy a corresponding pathological distinction had to be manufactured and hence arose the idea of an anterior and a posterior urethritis the point of separation being always the cut-off muscle. But the fact that this muscle forms an obstacle to fluids forcibly injected does not at all prove that it can afford a like obstacle to the backward progress of an inflammation. The surgeon stops his irrigation at the cut-off muscle simply because it is convenient to do so and not because it is rational. Then I have aimed to present an argument for a somewhat earlier attention to the prostate than I believe has been fashionable. I do not pretend to have said anything new, and yet I hope that I have put the matter in a form that may prove suggestive and stimulating. The morbidity from gonorrhea is at present appalling. Complications are common and the course of the disease protracted. This is especially true of neglected cases and of cases inefficiently treated, but applies also to the general run of sufferers taken indiscriminately. Surely no argument is necessary to prove that the therapy which the rank and file of patients receive is unsatisfactory. May we not hope that a more thorough searching out of the gonococcus wherever it may reside and attacking it early by every means in our power, would result in speedier and completer cures?

Metropolitan Building.

DISCUSSION

Dr. H. J. Scherek, St. Louis: Mr. Chairman and Gentlemen: The paper just read by Dr. Young has evidently been given considerable thought by the essayist and deserves our careful consideration. Because I know he has given it considerable thought and because I know Dr. Young very well and favorably, I may, perhaps, be allowed to take some exceptions to his remarks.

Those of us who have seen much of this condition and have charge of clinics, form their own conclusions, based upon their own experiences. It is a strange thing that no set of men who handle gonorrhea apply the same surgical principles to it as they would to suppurative conditions in other parts of the body. If that were done, I think our treatment would be very much simplified and our results very much better. In the first place, I do believe, clinically, that there is a sharp distinction between the anterior and the posterior urethra. I believe that the explanation is

that it is, perhaps, analogous to the condition that we see in gonorrhea in women. You know in the adult female the vagina seldom if ever cultivates gonococcus. Gonorrhea in women, except in very young or old women, is limited to the vulval position and cervical canal. A similar condition may exist in anterior and posterior urethra; this may account for the posterior urethra not being involved as often as the anterior.

The two-glass test may be of very little value, but if the urine is carefully centrifugalized and examined very carefully with the microscope, you can very often tell that the posterior canal has not become infected.

I am absolutely opposed to any local treatment in the canal until after the disease has practically gotten in the chronic sero-purulent and much less infective stage. I believe we can accomplish more good and limit our complications if we put our patients on a simple, rational treatment, keeping the bowels open and with internal administration of alkaline drugs and one of the oils that are usually used. But if we have to treat the canal locally (which ought not to be done, unless the disease lasts, if it does last, ten days or more), we can accomplish much more by treating the disease directly through the endoscope and making applications. That is the plan I follow in my private work, and as often as I can in my clinic work.

The good results from this form of treatment do not apply only to the results so far as the local gonorrhea is concerned, but I believe it is more far-reaching in that it prevents those after-complications that are so common. If we irrigate, we cannot but help taking a chance of forcing discharge with gonococci back, and I believe the less we interfere when the disease is in an acute inflammatory condition, locally, the better. I am certain that in an abscess cavity elsewhere, no surgeon would irrigate into that cavity for fear of extending the inflammation. Modern surgery today teaches us to open the pus cavity, drain it, and after operation not to go in and stir up things. The modern surgeon leaves things very much alone, and I think that the broad surgical principles should be applied to the urethral canal. It is not new with me. In discussing it with other specialists I was glad to find they had adopted that plan.

I think Dr. Young's paper of much importance in that it urges us to get away from old ideas. His study of the subject, I know, has been very careful and exhaustive, and I think his ideas should be given careful consideration.

Dr. H. McC. Young: I have really nothing to add. I think what Dr. Scherck has said about abstinence from local treatment in very acute conditions should be taken carefully into consideration. The purpose of my paper was principally to bring out the pathology and the course of the disease, and not so much the treatment. I meant especially to call the attention of the profession to the necessity, at any rate, of being constantly on the lookout for posterior involvements, recognizing them early. I do not agree with Dr. Scherck as to the two-glass test. It seems to me a man might have posterior involvement, have a suppurative condition there, pass urine into one glass and wash all that pus away; if it has not become mixed with the urine in the bladder, I do not see how the second glass can contain any pus. I think before we exclude posterior urethritis, we certainly ought to wash out the anterior urethra very carefully and then allow the patient to pass his water. If now there is any pus present, then it means he has a posterior involvement. If however, the urine which he now passes is entirely free from pus, even when centrifugalized, then I would say he is free from posterior involvement.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE SIGMOID FLEXURE OF THE COLON*

H. W. SOPER, M.D.
ST. LOUIS

It is not my purpose to mention in this paper all the diseases of the sigmoid flexure, but to speak particularly of that class of cases that are amenable to treatment by minor surgery or medical methods rather than by radical surgical procedure.

The sigmoidoscope, which was first devised by Howard Kelly, has undergone many improvements and modifications. The one used by me is Tuttle's modification of Strauss' instrument, with the exception that the tubes are $\frac{5}{8}$ inch in diameter instead of the usual $\frac{3}{4}$ inch. They are consequently much lighter and can be introduced with less discomfort to the patient. Three lengths are employed, 8 inch, 10 inch and 12 inch. If at all possible, the knee-chest position should always be used in sigmoidoscopy. In this position the air rapidly distends the ampulla recti and greatly facilitates the passage of the instrument. It is rarely necessary to use the inflating attachment. Should muscular contraction prevent further progress of the tube, gentle pressure with the cotton applicator is usually sufficient to overcome it. The oil applicator as recommended by Boas and Strauss is often useful, but may dim the light.

After the tube has been passed through the sphincters the obturator is withdrawn and further progress made under the direct guidance of the eye. Schreiber¹ and Strauss² have both made careful measurements in centimeters and have given definite rules as to the exact distance the next turn is to be expected. This is really not necessary, but a good working rule is to search downward when the tube has been introduced a distance of 5 to 6 inches; i. e., the proximal end of the tube should be raised, as the loop of the sigmoid usually falls forward when the patient assumes the correct knee-chest posture. It is only in rare cases that one is able to introduce the tube further than 10 inches; as a rule, the 8-inch tube is the most useful. Further progress, as Schreiber has shown, is often an illusion; the elastic sigmoid mesentery stretches and permits only an apparent and not a real passage of the tube through the lumen of the bowel.

The preparation of the patient preliminary to examination is of importance. Cathartics given too soon before the examination interfere with the peristalsis and produce contractions of the bowel which may result in erroneous conclusions.

* Read before the St. Louis Society of Internal Medicine, March 19, 1913.

1. Julius Schreiber: *Die Rekto-Romanoskopie*, Berlin, 1903, Aug. Hirschwald.

2. H. Strauss: *Prokto-Sigmoidoskopie*, Leipzig, 1910.

A good practice is to make the first examination without any preliminary treatment whatever. Very often masses of fecal matter in the dilated ampulla recti may be avoided and the tube passed up into the sigmoid. If fecal matter obstructs the view, an enema of oil may be given the night before the examination is to be made, followed in the morning by a cleansing warm-water enema. It is preferable to allow from six to eight hours to elapse after the water enema, because if made too early troublesome contractions are likely to be met with.

Chronic Spastic Contraction of the Sigmoid.—Normally, there is a tendency for this portion of the colon to be in a state of tonic contraction. However, as viewed in the knee-chest position the folds readily separate and several inches of bowel are seen beyond the end of the tube. In chronic spasticity the tube enters with great difficulty. Every inch of the way is combated by a steady contraction. Within the folds of mucosa small hard masses of fecal matter are often met with; the mucosa frequently shows evidences of mild inflammatory processes. Externally, the loop of the sigmoid, as well as part of the descending colon, may be palpated as a finger-like cord, often tender to pressure. The feces have a characteristic fragmentary appearance. The resulting constipation is very obstinate. In some cases a daily evacuation may occur, but it is incomplete and fecal stasis results in the cecum and transverse colon.

Treatment.—Cathartics must be avoided, as they invariably increase the tonic contracture of the bowel. Direct massage is also contra-indicated for the same reason. The diet should be rich in cellulose and sugar, provided the stomach will stand it. The regular administration of agar-agar is of great value. In severe cases an enema of 6 to 8 ounces of sterilized cottonseed oil should be given each night and retained until morning. An enema of water should be avoided, as it stimulates further contraction and very often produces pain. Many cases present a concomitant spasticity of the entire colon and very frequently an atonic condition of the stomach is present. This symptom complex occurs almost invariably in the congenital enteroptotic type, and may be regarded as a disturbance in the general tonus produced by defective innervation. The treatment of this class of cases broadens into an attempt to improve the general nutrition of the nervous system.

Chronic Atony of the Sigmoid.—This condition is frequently seen in the aged and particularly in patients of all ages who have used the large water enemata for any considerable period of time. The ampulla recti appears much larger than usual, the valves often being absent or very indistinct. Large masses of fecal matter are usually encountered, the sigmoid is entered easily and very little tendency to contraction is ob-

served. The treatment consists of the same dietetic régime as in the contracted form. Direct massage and abdominal muscle exercises are indicated. Small cold water enemata and cold compresses to the abdomen are helpful. In severe cases pure fluid extract of cascara, given regularly in graduated doses before meals, just sufficient to produce a daily evacuation, may be resorted to.

Amebic Dysentery.—The diagnosis is greatly facilitated by means of the sigmoidoscope. The lesions have a characteristic appearance; the small superficial ulcers covered with a light layer of gray mucus, which, when wiped off, leaves a granular red surface which oozes bright-red blood. If a small cotton applicator is used the mass of mucus may be more readily transferred to the slide for examination. In ten cases I examined, these lesions in the sigmoid were always present. Often careful feces examinations failed to reveal the presence of the ameba, but the small mass of mucus taken directly from the lesions by means of the sigmoidoscope contained many of them. These lesions often persist in cases which have been thoroughly treated by the ipecac salol coated capsules, and which appear to have made complete recoveries. I employed ipecac locally by means of the sigmoidoscope and dry powder insufflator after the method devised by E. Rosenberg in Albu's clinic. This method invariably caused severe irritation as well as nausea and vomiting. Even in dilution with bismuth 1-10 local irritation was produced. After considerable experimentation with several different powders, a mixture of tannin and bismuth 1-10 was found to be most efficacious in clearing up the lesions and destroying the organisms without producing irritation or congestion of the mucosa. The tube is inserted 8 inches and the powder blown in as the tube is gradually withdrawn. The entire wall of the bowel can thus be coated with a thin layer of powder. A few daily applications often suffice to heal the ulcers and completely destroy all the amebae.

Subsequently this method was used in conjunction with the ipecac capsules by mouth, with very gratifying results. Six cases were completely cured; i. e., no relapses occurred within two years. Two cases passed from observation before the treatment was completed. However, both showed much improvement. One inveterate case of ten years' standing resisted all methods of treatment. He had ten thorough courses of ipecac always with great improvement. The sigmoid lesions were completely cleared up always to return. Axisa's³ recommendation of the Kosam treatment was followed in this case with no benefit whatever. A second trial of this drug was made in a severe case with no benefit. This second case was finally cured by the administration of the ipecac pills combined with the tannin and bismuth powder insufflation.

3. Edgar Axisa: Die Amöben-Dysenterie, Archiv. für Verdauungskr., 1910, Bd. XVI, H. 6, S. 667.

Simple Ulcers and Inflammatory Processes.—Simple ulcers and inflammatory processes are best treated by Rosenberg's dry-powder method. It seems to be of but little consequence just what powder mixture is used. I prefer the tannin and bismuth 1-10.

Diverticulitis of the Sigmoid.—The diagnosis of this condition before the formation of a large abscess or before obstruction or perforation occurs, appears to be very rare. Dunn and Woolley⁴ report one early ease of recovery after operation, two cases of death following operation for obstruction and three cases in which the diagnosis was made at autopsy. C. A. Powers⁵ reports one early case in which recovery was prevented because of the onset of postoperative pneumonia. Three cases were seen by me, all late in the course of the disease after large abscesses had formed. In all three cases rupture had occurred into the bowel and the pus was draining freely. The symptoms were the same as those presented by the ordinary attack of slow pus-forming appendicitis, except that the left inguinal region was involved. In each case the expectant plan of treatment was followed. Magnesia sulphate was given in doses sufficiently large to keep the bowel well cleared of fecal matter. Enemata were avoided for fear of washing material back into the abscess cavity. In all three cases complete recovery resulted without sequelae or recurrences.

Single and Multiple Adenoma and Adenocarcinoma of the Sigmoid.—The multiple adenocarcinoma of the colon is not considered here, but the cases reported are limited to growths occurring only in the sigmoid.

CASE 1.—Dentist, aged 55, presented himself in February, 1910, because for several months he had observed small masses of blood in the feces. He had been troubled by hemorrhoids and spastic constipation for many years. Had been treated for colitis by local and internal medication. A sigmoidoscopic examination revealed the presence of six small growths in the sigmoid, 7 inches from the anal margin. The growths varied in size from a small pea to a hazelnut. The largest one was pedunculated about three-fourths of an inch in length and at the end showed a typical cauliflower-like growth. A snare was devised and the end of the growth pinched off for examination. It proved to be carcinoma and the entire lot was removed. The large one was pinched off by the wire snare, but only the soft part of the growth came away leaving a central stem of tough connective tissue about the size of a match. After considerable trouble the connective tissue center and base were finally destroyed by the electrocautery. The small growths, which were from one-fourth to one-half inch in length, with broader bases than extremities, were curetted and the bases cauterized in the same manner.

Sigmoidoscopic examination from time to time, the last one made about a month ago, showed no evidence of recurrence. The pathologist's report is as follows:

This material consisted of several blood-stained, soft, yellowish or gray curettings. The largest measured

6 mm. in diameter. Sections of this (paraffin) show an adenomatous growth of the intestinal gland. The epithelial cells in many places show great variation in size and shape and they have lost their glandular arrangement and columnar character. They have both filled the lumen and broken through the basement membrane. Some of the cells are seen loose in the adjoining stroma.

The diagnosis is therefore a malignant adenoma. The smaller bits of the material did not show a tendency toward malignancy, but resembled the picture of a benign adenoma or polyp. D. L. HARRIS, M.D.

CASE 2.—Merchant, aged 54, came under observation in October, 1910. Had suffered from chronic spastic constipation for years. Had noticed a little blood in the stool from time to time. The sigmoidoscope revealed the presence of two growths 7 inches from the anal margin. They were about three-quarters of an inch in length, the bases only slightly smaller than the extremities. A new snare was devised and with the aid of Jackson's bronchial instruments, slightly modified, they were much more readily removed than those in Case 1. The bases were cauterized by means of the chromic acid bead (as used by rhinologists.) A small but sufficiently deep eschar results which heals within a few days. This case has also been kept under observation since, with no evidence of recurrence.

Similar adenomatous growths were removed in the same manner in five other cases. Three of them presented no symptoms but constipation, two having in addition observed small masses of blood in the feces. Each case presented a spastic condition of the sigmoid and all of the growths were located in the same region.

In all probability the contracture of the bowel is a factor in the etiology of the growths, possibly by interference with the blood-supply. No pain is experienced by the patient during the operation, unless considerable traction is made or too much inflation is employed. Both procedures have the effect of increasing the tension, and the pain which results is no doubt explained on this hypothesis, being in accord with the observation of Hertz,⁶ "that the only immediate cause of true visceral pain is tension." Not only is the normal mucosa devoid of sensation, but the diseased and ulcerated surfaces as well.

Case No. 1 demonstrates that malignancy may develop in these benign growths. Strauss reports a similar case and mentions two cases of carcinoma near which small adenomata were observed, suggesting the idea that the cancerous growths probably developed from such a benign tumor.

Finally, it is obvious that the small adenomata are dangerous and it should come within the province of the physician to detect them early and remove them by this simple method. Even when malignancy begins, it is possible to destroy the growth completely without resorting to resection of the bowel. The case should be kept under observation and should infiltration of the mucosa, or any other sign of recurrence appear, surgical intervention must be prompt.

Wall Building.

6. Arthur J. Hertz: *The Sensibility of the Alimentary Canal*, 1911. Oxford Univ. Press.

4. Dunn and Woolley: *Am. Jour. Med. Sc.*, July, 1911, No. 1, p. 15.

5. C. A. Powers: *Tr. Am. Surg. Assn.*, abstr., *Jour. Am. Med. Assn.*, July 27, 1912, n. 301.

CHRONIC INFECTIOUS ENDOCARDITIS, WITH INFARCT OF LUNG, SPLEEN AND KIDNEY*

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This patient, selected from the wards of Dr. William Engelbach, visiting physician to the St. Louis City Hospital, gives a history of illness beginning about five months ago, characterized by progressive loss of strength, cardiac palpitation, broken sleep, puffy eyelids, swelling of the legs and intense dyspnea. Two and one-half months ago he was compelled to give up his work as a laborer.

He is 36 years old, and has had the ordinary diseases of childhood. Ten years ago he had an acute gonorrhea. After an indefinite time he had an acute arthritis at the knees, which subsided and has not troubled him since. There is no history of lues. The patient has been a regular user of tobacco and alcoholics, frequently drinking to excess.

Family History.—One brother died of spinal meningitis; mother died of hepatic cirrhosis.

Physical Condition.—Well developed, moderately nourished, but acutely anemic at the time of entrance into the hospital. Skin and mucous membranes cyanotic, and dyspnea marked; heart enlarged in all directions, right limit of complete dullness reaching right sternal border. There was a pronounced mitral regurgitation, accompanied by a relative tricuspid insufficiency with enlarged, tender liver, and pulsating veins in the neck. His arteries were moderately sclerosed.

Throughout the chest posteriorly were mucous râles, diminished breath sounds, and impaired percussion note, indicating a condition of passive congestion.

Urinalysis.—Amount in twenty-four hours, 20 ounces; sp. gr. 1.030; albumin present; with epithelium, erythrocytes, leukocytes, and large numbers of fine and coarse granular casts in the centrifugized sediment.

With absolute rest in bed, digitalis and saline cathartics, improvement soon began. In about a week a pleuritic rub developed in the left side anteriorly, but soon disappeared. For many weeks the temperature continued to fluctuate a few fractions of a degree above normal, as at the time of his entrance. At irregular intervals the patient experienced a sharp pain in the splenic region, accompanied by a moderate rise of temperature which subsided in a day or two. The spleen became enlarged and tender at these times.

Two and one-half months after entrance into the hospital the patient was much improved, but about this time the respiratory rate began to increase and an annoying cough developed, with mild fever. Rather suddenly, on the third day, the patient became chilly and experienced a sharp pain in the left side of the chest, with intense dyspnea and inability to lie down. The temperature rose to 102.8 F., respirations 40 and pulse 120. Morphine was necessary to relieve the dyspnea. In a short time he began to get up large quantities of tenacious sputum intimately admixed with bright blood. Mucous and whistling râles were heard throughout the right lung and upper part of the left. In the left base posteriorly breath sounds were diminished and of tubular quality; percussion note and vocal fremitus diminished. Dullness was soon complete over an area extending from the midspine to the midaxillary line, and reaching up to the angle of the scapula above. Over this area breath sounds and vocal fremitus were soon abolished, but about the borders and to an extent over the dull area bronchophony and whispered pectoriloquy appeared. In a few days the râles in other parts of the chest gradually disappeared, and the bloody expectorations ceased. A fluoroscopic examina-

tion of the chest showed no fluid shadow, but a mere veiling over the dull area. Exploratory thoracentesis was negative for fluid. There were no petechiae or purpuric spots in the skin, and no hemorrhages from visible mucous membranes. No occult blood in the stools. The ophthalmoscope showed both fundi normal.

Blood from a vein in the arm inoculated into bouillon,¹ and agar was negative after forty-eight hours; transplanted into blood-bouillon also negative. Smears made on numerous occasions contained no malaria plasmodia. Leukocyte counts made at various times never exceeded 10,000 per cu. mm.²

We have here a certain combination of conditions chronologically grouped as (1) cardiac, (2) renal, (3) splenic and (4) pulmonary.

1. The primary examination revealed an endocarditis and mitral regurgitation with relative tricuspid insufficiency. The particular form of endocarditis present is of peculiar interest. It is not a simple acute endocarditis, such as we might see in a rheumatic patient; nor one the resulting chronic valvular lesions of which are but manifestations of a past active pathology. Neither is it that frank, septic and ulcerative variety classed as malignant, but rather an intermediary form exhibiting characteristics of various types: low grade, fluctuating and prolonged temperature; low leukocytosis; embolic properties; valvular lesions; blood sterile, except on special media. Rosenow,³ in discussing its etiology, says, "It is noteworthy that the form of endocarditis in question—namely, a chronic or subacute form which begins insidiously on a previously diseased valve, often with no demonstrable source of infection, and which nearly always runs a fatal course, is due to bacteria of very low virulence. . . . The various strains differ quite markedly in certain details, but at certain stages they are all freely susceptible to phagocytosis . . . and produce endocarditis quite regularly when injected intravenously in rabbits. When injected in other regions they produce only slight illness and are rapidly destroyed by phagocytosis." In speaking of the mode of production of endocarditis in rabbits, he says, "Clumps of bacteria lodge in the capillaries, produce hemorrhage, and probably because of the relatively slight vascularity in the valves the organisms grow into clumps before leukocytes are able to cause their destruction. Hemorrhages and endocarditis occur at the apex of the papillary muscles in the same way. Hemorrhages occur at the base of the semilunar valves also, and vegetations have been seen to grow from this region. Thus we see that the localizations on the valves is an embolic process and not due to implantation." Previous

1. The bacteria which have been found apparently responsible in chronic infectious endocarditis are not usually easily obtained in culture from the blood. E. C. Rosenow (Jour. Infect. Dis., 1912, 9) used blood agar and ascites-dextrose-broth.

2. While we may consider 10,000 leukocytes per cu. mm. as slightly above normal, this number has been considered the normal average by some. See "Value of the Leukocyte Count," by H. W. Hewitt, Annals of Surgery, December, 1911.

3. E. C. Rosenow, Jour. of Infect. Dis., 1909, 6, 245; 1910, 7, 411, 429, and 1912, 9, 211.

*Clinical demonstration before the Medical Society of the City Hospital Alumni, Feb. 1, 1912.

injury to a valve renders it more susceptible to this process, and in this connection it may be significant to call attention to the gonorrhea and obscure arthritis which this patient has had.

2. The renal lesion present is evidently secondary to the cardiac trouble, since under treatment the pronounced urinary findings have cleared up remarkably, while the mitral regurgitation, though compensated, remains. The urinary findings have been those of a parenchymatous inflammation, with blood-pressure ranging from 128 to 152 mm. Hg. During the period of broken compensation the passive congestion intensified the urinary signs, but the presence of such quantities of blood in the urine is highly suggestive of infarct in the kidney from emboli of mitral origin.

3. The same supposition applies even more forcibly to the spleen. Repeated attacks of sudden pain followed by slight increase of temperature, with temporary enlargement and tenderness, in the presence of mitral disease, could hardly be otherwise interpreted.

4. In the presence of endocarditis and mitral insufficiency we may reason thus: A few days before his acute attack the patient began to experience incompensation from the mitral leakage. This produced increased back-pressure in the left auricle, which responded by dilatation and hypertrophy, increasing blood-pressure in the pulmonary circulation. This added to the work of the right ventricle, which became weak and dilated, failing to an extent to maintain normal velocity of the pulmonary stream. Remembering the endocarditis and slowed current, we can conceive of a deposition of fibrin, which, becoming interwoven with the muscular bundles projecting into the cavity of the auricle, enhanced clot formation within the auricular appendix. As the clot enlarged and began to project into the current, a portion or the whole was dislodged and carried down into the right ventricle, whence it was passed out into the pulmonary artery, blocking one of the non-anastomosing branches, producing an infarct in the lung tissue normally supplied by the embolized branch. Inasmuch as the patient had a tricuspid insufficiency earlier in his illness, it becomes possible to add another link in the chain of causative factors—namely, that during the failure in the right ventricle, tricuspid insufficiency again occurred, the resultant leakage into the right auricle, meeting the slowed current from the venae cavae, produced a venous whirlpool within the auricle, increasing the predisposition to clot formation.

The resulting physical signs and symptoms depend on the pathological processes involved. With the incompensation came passive congestion, cough, dyspnea, transudation and râles. During this time the auricular clot was forming, and with its passage into the pulmonary artery

sudden distress was felt; and with the stoppage of a considerable portion of the pulmonary blood-mass dyspnea was acutely intensified. Localized pulmonary stagnation and acute passive congestion induced infiltration of the tissues and transudation of serum and blood elements into the alveoli and bronchioles. Hence the bloody sputum, impaired resonance, loss of vesicular murmur and fremitus. As the process cleared up and the involved bronchi were emptied, bronchial breathing again appeared and voice sounds were exaggerated.

The signs of infarct in the lung gradually cleared up, the temperature returned to its former level and the patient after about a month left the hospital much improved. While out, he returned more or less to his former habits, went to the dispensary for treatment, and in a few weeks returned to the hospital suffering from incompensation, with dyspnea, swollen legs, cough, etc. The signs of infarct had disappeared, but there had been blood in the urine on a few occasions, and he had had a return of the splenic pains. On his return to the hospital he passed from my care and was treated by those having him in charge for his mitral trouble.⁴

The production of hemorrhagic in contradistinction to anemic infarct in the lung has been attributed to different processes. Virchow and Rindfleisch assume that some time elapses between the obliteration of the vessel and the formation of the infarct, and that during this interval the vessel becomes inflamed proximal to the point of obliteration and ruptures. At this moment the infarct is produced. Others hold that the tissues fill up due to back-pressure through the veins, incident to the usually accompanying mitral leakage. Thus the so-called interval between the vessel obliteration and the advent of signs of infarct may be accounted for as the time required for the tissues to become filled.

DIAGNOSIS

The diagnosis depends on the interpretation of predisposing conditions, course, physical signs and symptoms. Endocarditis may arise from a number of demonstrable sources, such as rheumatism, tonsillitis, various bacterial infections, or it may be associated with certain of the arthritides. Syphilis should be suspected in the non-rheumatic of middle age. External signs are frequently significant. Osler⁵ describes a case presenting painful ephemeral nodes in the skin (which he considers pathognomonic), purpuric spots, embolic aneurysm of the left femoral artery and large infarct in the spleen. A diffuse nephritis commonly accompanies the condition as encountered clinically in man and produced experimentally in animals. Rosenow, already

4. While walking across the ward one day against orders the patient dropped dead. No autopsy was secured.

5. Osler: *Chronic Infectious Endocarditis*, Interstate Medical Journal, February, 1912.

quoted, found hemorrhages in the kidney, usually glomerular, a number of times; and he noted that when sufficiently large doses of bacteria were given to produce death in rabbits in twenty-four hours that marked cardiac, renal and pulmonary hemorrhages were found. He remarks that in the heart valves these changes were not found in this short time, and that these results were not seen in guinea-pigs, probably because of an absence of blood-supply to the valves in these animals. The nephritis is doubtless intensified by the circulatory changes incident to the cardiac insufficiency which develops.

Small or central infarct in the lung may produce no signs, but large ones and those located near the periphery of the lung may give rise to confusing signs. If the infarct be large and lie between the lung surface and a bronchus of size, or enclose a bronchus, signs of consolidation may predominate. If the bronchus becomes filled with blood or transuded fluid, passage of air in that bronchus will cease; and with the loss of breath sounds signs of fluid in the chest may seem apparent. If the infarct occupy a position near the base, pleural puncture may be necessary to differentiate from effusion. The acute onset, bloody sputum and predisposing conditions, endocardial and valvular defect and the probable history of infarct in other organs or parts, are highly suggestive.

TREATMENT

Treatment should early consist in preventing those diseases productive of endocarditis. Proper rest and treatment continued until complete recovery from rheumatism and the various acute infectious diseases should be insisted on, especially in the young. All those measures which constitute general hygiene and enhance nourishment should be instituted.

In directing treatment toward the heart itself after the endocardium and valves have become injured or diseased, aside from the use of vaccines and other measures to overcome infection, the chief object should be to maintain or increase the myocardial reserve force and overcome insufficiency. General measures toward this end include proper rest and proper exercise, tonics, diet, suitable climate and altitude and manner of life. Each patient will require a special study to correctly determine these factors.⁶ Many patients, after a short course of rest and digitalis, attempt to return to their usual duties, giving up treatment as soon as some benefit has been obtained. This is particularly true in the class of patients seen in general hospitals, and is a very pernicious habit. In many cases exercise should be limited to body massage alone, and this form of exercise is very beneficial to the bed patient unless he be in *extremis*. When the patient is able to be up,

so-called graduated exercises, strictly adhered to and not exceeded, may be permitted. Graduated walking is one of the most common applied forms. While rest is very essential, we must remember that the muscle which has been gradually exercised and trained has force in reserve.

Digitalis is usually the best drug for insufficiency, whether manifested by dyspnea, edema, diminishment of the pulse-pressure, dilatation or myocardial degeneration, in which last other stimulants are more or less contra-indicated. It should be given to effect, and when this is not manifest or it disturbs the stomach, strophanthus may be substituted. To the ambulatory patient who can go about comfortably, but becomes dyspneic on exertion, digitalis should be administered in small doses over considerable periods, or every few weeks he should take a course in moderate doses. Tonics, especially iron, are very valuable in nourishing the heart muscle.

When infarction occurs in the lung and occasions symptoms, the treatment should be such as will maintain the tone of the cardiac muscle and conserve the patient's strength. The therapeutic indications are chiefly symptomatic. Codein or morphin may frequently be required to enable the patient to rest and breathe with some ease. Should infection or gangrene supervene, it must be dealt with by ordinary biological, surgical and medical measures.

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ONE HUNDRED BLOOD STUDIES IN CONSTIPATION *

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The following table presents a summary of 100 blood examinations in patients where the chief trouble seemed to be intestinal stasis. In some cases there were definite lesions such as pyloric stenosis, chronic gall-bladder disease, enteropneumosis, etc.; in others no organic cause could be found. Many of the patients were subjected to surgical procedures and thus the condition was really identified. No examinations are included where such associated lesions could be held responsible for the blood-picture.

The first of the studies were made before I had established a definite system of recording the color reactions to my Wright's stain. So for these studies I must ask my colleagues to depend on my memory for the color picture. But I believe that my conclusions stated below are conservative and thoroughly justified:

These cases fall into three general groups: (1) Those where the lesion is in the upper bowel or

6. An instructive article on "Treatment of Chronic Endocarditis" by Linsley R. Williams, is in Vol. III, Twenty-Second Series of International Clinics.

* These studies should have been published with the discussion of the Symposium on Constipation that appeared in the August issue; through inadvertence they were omitted.—Ed.

	Ihb.	Total Leucocytes	Polys.	Manos.	Ambo.*	Neut.*	Oxy.*	Baso.*	Eosin.	Mast.	Imma- ture Monos.	Imma- ture Polys.
1	85	6,800	66	30	..	50	..	..	4	0	26	38
2	95	8,500	60	40	2	..	1	..	0	0	1	7
3	90	5,000	52	47	..	..	..	..	1	0	2	7
4	90	4,000	68	29	8	41	..	8	2	1	2	5
5	80	9,000	76	23	11	37	12	4	5	..	3	5
6	75	8,500	72	28	20	37	2	5	5	..	1	3
7	100	8,500	61	39	5	45	2	4	1	..	32	2
8	..	9,000	71	29	23	44	0	0	1	0	6	3
9	90	10,400	53	47	3	40	0	0	0	0	26	10
10	100	9,800	75	24	..	..	..	..	0	0	18	..
11	100	10,500	..	42	..	..	..	..	2	2	20	25
12	85	7,450	52	45	..	..	..	..	1	1	17	12
13	100	8,200	62	40	..	..	..	..	1	1	16	16
14	90	6,000	54	46	..	..	..	..	2	1	7	..
15	75	15,000	59	40	..	..	..	..	0	1	11	..
16	..	..	73	28	..	..	..	..	0	1	0	..
17	85	17,300	68	31	..	..	..	..	1	0	0	..
18	100	9,800	67	32	..	..	..	..	1	0	2	..
19	100	8,300	63	36	..	..	..	..	1	0	3	..
20	75	7,800	58	39	..	..	..	..	2	0	5	..
21	100	..	47	55	..	..	..	..	0	0	11	7
22	90	8,000	78	21	..	..	..	..	1	0	3	..
23	90	7,000	56	45	..	..	..	..	3	1	4	..
24	..	4,300	68	31	..	..	..	..	0	1	3	..
25	90	4,000	72	22	..	..	..	..	3	2	..	..
26	100	5,800	60	33	..	..	..	..	4	2	1	..
27	95	13,000	..	..	..	..	..	..	..	..	..	..
28	100	4,900	54	38	..	..	..	..	3	3	6	..
29	..	13,500	79	16	..	..	..	..	2	1	0	..
30	100	6,000	64	34	..	..	..	..	..	..	6	..
31	100	6,000	54	41	..	..	..	..	3	1	11	..
32	100	7,000	62	28	..	..	..	..	1	1	4	..
33	..	8,800	60	36	..	..	..	..	1	1	11	..
34	85	7,100	60	38	..	..	..	..	2	0	5	..
35	70	8,300	75	22	..	..	..	..	3	0	3	..
36	85	7,000	69	26	..	..	..	..	2	1	0	..
37	100	5,000	60	37	..	..	..	..	0	1	30	..
38	90	7,600	50	49	..	..	..	..	1	1	33	..
39	70	5,900	52	44	..	..	..	..	1	1	6	..
40	70	4,000	35	50	..	..	..	..	8	7	50	..
41	..	..	65	40	..	..	..	..	22	..	20	..
42	70	..	57	39	..	..	..	..	3	..	11	..
43	70	8,000	58	52	..	..	..	..	0	0	10	..
44	100	8,866	70	29	..	..	..	..	2	0	2	..
45	..	..	51	40	..	..	..	..	..	1	3	..
46	100	7,200	74	24	..	..	..	..	0	0	4	..
47	95	..	61	32	..	..	..	..	5	2	5	..
48	80	7,916	39	57	..	..	..	..	1	0	10	..
49	..	15,000	44	50	..	..	..	..	4	0	13	..
50	70	13,500	86	12	..	..	..	..	0	0	2	..
51	90	11,275	74	30	..	..	..	..	0	0	10	..
52	90	7,220	66	29	..	..	..	..	14	0	9	..
53	100	8,600	50	45	..	..	..	..	3	1	36	..
54	90	..	72	43	..	..	..	..	0	0	17	..
55	70	10,600	70	24	..	..	..	..	1	1	4	..
56	90	12,000	73	25	..	..	..	..	2	0	5	..
57	..	..	67	33	..	..	..	..	0	0	4	..
58	100	11,500	70	30	..	..	..	..	1	0	3	..
59	80	7,600	53	36	..	..	..	..	2	1	2	..
60	90	9,600	65	34	..	..	..	..	1	0	6	..
61	80	12,000	66	32	..	..	..	..	1	1	3	..
62	100	..	63	33	..	..	..	..	2	1	0	..
63	90	7,000	64	33	..	..	..	..	0	1	2	..
64	100	7,000	61	38	..	..	..	..	0	1	1	..
65	..	..	61	35	..	..	..	..	1	3	0	..
66	80	6,900	90	7	..	..	..	..	1	1	5	..
67	70	4,000	64	32	..	..	..	..	4	0	9	..
68	90	8,000	64	34	..	..	..	..	2	0	1	..
69	100	5,000	69	31	4	55	0	1	0	1	16	..
70	90	6,500	74	26	2	60	0	0	3	2	11	..
71	80	10,000	65	35	0	53	0	0	1	2	20	..
72	85	6,500	67	33	1	58	0	0	0	4	16	..
73	80	..	75	23	..	..	..	..	1	1	3	..
74	100	6,500	65	36	0	61	..	..	0	1	10	..
75	60	6,600	73	27	6	39	1	20	2	2	20	..
76	100	10,300	56	44	3	44	0	0	4	2	33	..
77	90	8,900	61	39	19	18	0	12	2	1	24	..
78	85	9,300	62	38	20	33	0	4	1	0	27	..
79	100	..	79	21	30	34	0	5	1	4	12	..
80	100	4,600	64	36	22	32	0	2	2	2	26	..
81	100	7,300	68	32	4	48	0	7	0	0	17	..
82	90	8,000	66	34	5	36	0	7	3	1	24	..
83	90	12,600	66	34	2	45	6	8	3	0	3	..
84	70	..	67	33	9	45	0	0	0	0	3	..
85	50	12,300	89	11	69	9	0	0	1	1	0	..
86	..	..	52	48	47	0	1	0	0	1	4	..
87	55	11,300	78	22	28	41	0	1	2	0	0	..
88	100	4,500	68	31	33	18	0	6	2	2	18	..
89	80	7,300	78	22	32	26	3	14	0	1	22	..
90	80	15,500	73	26	0	62	0	0	0	0	0	..
91	90	6,800	28	71	1	56	1	1	0	1	5	..
92	95	9,000	72	28	13	38	6	1	4	..	2	..
93	90	11,000	62	38	7	46	0	1	0	0	21	..
94	90	6,500	68	32	13	30	0	12	1	3	22	..
95	100	8,000	62	38	26	26	1	3	2	0	20	..
96	90	7,500	82	18	69	12	0	0	0	0	12	..
97	90	6,000	73	27	0	69	0	0	2	1	18	..
98	90	9,500	50	50	5	31	0	2	2	0	27	..
99	90	9,300	63	37	7	36	0	8	2	2	19	..
100	60	7,600	57	35	13	30	7	..	1	1	8	..
Averages ...	88	8,395	65	34	15	30	1	4	2	1	11	17
(Omitting fractions.)												

*The E-granular cells (Pappenheim), or those generally called "neutrophiles," are subdivided into these four groups according to their reaction to Wright's stain. The "ambo" group consists of the cells whose granules are large, bluish and lie in a mauve cytoplasm. The "neutro" group shows only small granules in a colorless background. The "oxy" group has reddish granules. The "baso" group has granules not large enough to be classed as mast-cells, but larger than the neutrophiles and distinctly blue in tone.

stomach; (2) those showing colonic stasis, and (3) those in which the stasis has produced systemic effects.

Of the first group, Nos. 12 and 13, 19, 34, 54, 55, 74, 78, 83, 84, 89, 91, 93 are examples. The tendency is toward a high total count. The percentage of the mononuclears is increased. Quite generally the granular cells stain heavily with the blue.

Of the second group we find examples in Nos. 9, 10, 18, 20, 22, 27, 28, 29, 32, 38, 69, 77, 92, 99. These are characterized by a total count toward the upper limit of the normal. The color reaction differs quite distinctly from that of group one, for the granular cells are stained both by the red and the blue, thus giving a dirty mauve nuance.¹

As soon as the stasis produces an irritation of the hematopoietic organs ("autointoxication") we find the leukocyte count going above the 10,000 mark and the number of immature forms rapidly increasing (Arneth's "shift to the left"), e. g., Nos. 17, 50, 58, 90.

In looking over the table one is struck by the percentage of unripe mononuclears. It would seem as if the lymphadenoid tissue were inhibited so that the fully developed small lymphocytes were not being produced in sufficient numbers, nor in as relatively great numbers as the ripe granular cells.

In short, the impression left by these blood examinations is that intestinal stasis affects the blood-picture, producing a picture characterized by changed color reaction and an increase in the number of immature cell forms.

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THE TREATMENT OF DIABETES MELLITUS

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Possibly no form of disease requires so close an individual treatment as does diabetes mellitus. This is proven by the fact that all degrees in quantity and variety of carbohydrate feeding have been recommended, from total abstinence to excessive feeding, even of cane sugar, and that too by such authorities as Piorry, Bouchardt, Donkin (who recommended donkey's milk exclusively), Frerichs, Oettinger, Strauss, Strasser, Winternitz, Nunyan, von Noorden (oatmeal), Düring (rice), Mossé (potato), Sawyer, Friedenwald, Warschawski, Labbe, Lewaseheff, Siegel, Mohr, Langstein, Blum, Falta, Grund, Buggarten, Lampé, Klotz (intestinal flora theories), (inulin), Mendel, Minna, Lewis (all inulin advocates), Goodberg (who finds that respiratory metabolism is influenced by inulin), Bouchardt

(starvation ideas), Rolisch (vegetable diet), De Renzi (green vegetable diet), and others with possibly other notions.

In view of the above array I trust I may be pardoned for presenting one more idea which seems to have escaped them all, and which may yet prove to be the crucial idea in the treatment of diabetes. Furthermore, it is a generalized idea applicable to all or nearly all cases, notwithstanding Prof. Herman Strauss of Berlin in a recent article in *The Journal A. M. A.* (May 10, 1913), says: "The new researches have taught us that the manner in which the carbohydrates are given is of great importance. It is therefore the duty of a rational therapy to find, not only that preparation of carbohydrates, but also that sort of carbohydrate of which each individual patient can tolerate the greatest amount without secreting a great quantity of sugar. This complicates the diatetic treatment of the diabetic patient, but also makes it more successful than was formerly the case."

Strauss and the other German investigators lay great stress on the amounts of carbohydrates, proteids, albumins, etc., specifying values in calories, all of which after all amounts to little short of a vast amount of "love's labor lost," for even they themselves must recognize that every diabetic is a "law unto himself," and that even each individual is not the same two weeks in succession. The fact in the matter is each patient must be watched individually from day to day and his treatment regulated by common sense rather than by the apothecary's scales.

Now there are just two basic principles which I would announce as essential in the treatment of all diabetics, acute or chronic or otherwise: Every diabetic must have some carbohydrates continuously, and the carbohydrates ingested must be taken in such form as to be most slowly absorbed. These are the two basic principles. Under them von Noorden's carefully regulated carbohydrate-free days become unnecessary, and Strauss' careful measurements of calories become superfluous. Matters are wonderfully simplified. How do I assure slow absorption of the starches? Feed them *raw*. This obviates von Noorden's long cooking of oatmeal, and then his thorough mixing of it with fat to insure its non-absorption till it reaches the intestines. To accomplish the same thing others have recommended flour meal well cooked and then thoroughly mixed with fatty broths (Strauss' soups). Why cook the starchy foods at all? Uncooked, the starch grains are passed to the intestines and there are slowly digested and so slowly absorbed that the diabetic-weakened system can take care of them. These raw starches may be given preferably in raw green vegetables of all kinds. Also they may be given directly as raw flour or American corn starch, a teaspoonful or more as desired, simply stirred up in a glass of water. All cooked starches

1. Cf. Hoxie: The Blood-Picture of the Autointoxication Due to Chronic Colored Stasis, *Jour. A. M. A.*, May 8, 1912.

must be avoided and all sugars. Could anything be simpler? Now for some results:

During the summer of 1912 a young man, 23 years of age, came under my care for diabetes. All the routine methods of oatmeal diet, milk diet, restricted diet, ozone treatment, were tried during a number of weeks, but the patient grew steadily worse. He was a traveling man representing a manufacturing concern, quite active physically and much interested in athletics. Inasmuch as his diabetes had come on suddenly I suspected he might have sustained some injury to the pancreas, though he had no particular history of such injury. But as experimental injury to the pancreas of dogs always induces the appearance of diastase in the urine,¹ I examined this patient's urine for diastase and found the same present. On the supposition that this diastase in the blood, as shown by its presence in the urine, might have some relation to the patient's diabetes the thought occurred to me to administer the starch raw, in order that it might pass the stomach undigested and enter the intestines to occupy the excess of enzymes supposed to be furnished by the abnormal pancreas.

Whether my theory of experiment fit the case or not, the results were almost spectacular. Prior to his illness, which began in June, 1912, patient weighed 175 pounds, but he failed so rapidly that by July 10 he had to give up his position, and when he came under my observation, July 18, his weight had fallen to 144 pounds. He was passing six quarts urine daily with a specific gravity of 1.041, and a sugar content of 7.5 per cent. by fermentation saccharimeter.² Patient showed marked acidosis with acetone and diaetic acid both present in high degree in the urine. Acidity of urine was 85° (in terms of N/10 HCl). Under careful diet for three weeks with alkaline mineral waters and the customary procedures in diabetes, patient still continued to pass four quarts of urine daily with 5 per cent. sugar and 80° acidity. Acetone and diaetic acid persisted, and patient was daily growing weaker. August 8 I began the raw starch treatment, giving 5 grains in capsules every hour, with the idea of getting it into the intestines undigested. Also I advised liberal use of raw green vegetables with the same idea and to reduce the acidity of the urine. To this same end I ordered the juice of four to six lemons daily, because citric acid digests readily to an alkaline product, reducing the acidity of the blood. To inhibit intestinal fermentation salicylates were prescribed, and to check gastric secretion 1/250 grain atropin sulphate was given twice daily. By the third day of this régime the quantity of urine had reduced to two quarts, and the sugar

content was only 2.6 per cent. Patient did not urinate at night for the first time in two months. Diastase had disappeared, diaetic acid had disappeared, acetone showed a mere trace; patient was in high spirits and feeling fine, as though he had taken a new lease on life, he said. In three more days sugar had reduced to 0.9 per cent., specific gravity 1.013, acidity 20°, acetone a trace, diaetic acid none, quantity normal. In three more days, August 18, sugar and acetone had disappeared entirely, and urine was slightly alkaline, showing free phosphates. To correct this the lemons were withdrawn and some milk allowed, with the result that sugar promptly reappeared, due evidently to the lactose of the milk. So milk was prohibited, and in three days the urine was again free of sugar. A little white bread was then allowed and the sugar promptly reappeared in his urine. Evidently cooked starch must be avoided, and the bread was denied. A return was made to raw starch, a teaspoonful stirred in water three times daily, and in a few days the urine was again free of sugar, and has remained so ever since, except on one or two occasions when bread or too much buttermilk was taken. All medication was dropped when the sugar disappeared, except a little atropin, which was kept up for months. Patient's diet has been for a year now nuts, green vegetables, eggs, meats, citrate fruits, cheese, curds, buttermilk (sparingly, as it always contains some unfermented lactose), butter, an occasional slice of bread with a hope of gradually developing a tolerance to cooked starch, an apple occasionally and water. It is unnecessary to prescribe the expensive mineral waters in these cases if citrates are administered, and I believe they are more efficacious in overcoming the acidosis than sodium bicarbonate or the alkaline waters.

I have had five other patients with excellent results in all cases so far as the diabetes was concerned. I will give briefly the history of another case. A lad of 16 years fell from a barn and soon thereafter developed diabetes in a very acute and severe form. Patient came under my care Jan. 22, 1913, referred by Dr. Chadwick of Tyro, Kan. Patient had been passing ten quarts of urine daily and was very weak. Examination of the urine showed a specific gravity of 1.032, sugar 6 per cent., urea 0.6 per cent., acidity 84°, acetone, diaetic acid and diastase all present; no albumin, no casts, no bacilli present. Patient was suffering severe diabetic constipation. After trying a number of expedients, glycerin enemas were found to relieve this very nicely, but they had to be administered daily for four weeks before the bowels took up voluntary movements. In order to watch this patient closely, I took him into my own home and at once placed him on raw starches, green vegetable foods, nuts (except peanuts), washed curds, citrate fruits and salicylates and atropin, as Case 1, above. Immediate im-

1. Wohlgemuth and Noguchi: Berl. klin. Wehnschr., June 3, 1912.

2. In my first report of this case to the Jackson County Medical Society the sugar percentage was given as 15 per cent., but I subsequently found that the saccharimeter gave double the Fehling readings.

provement was observed, and in five days the quantity of urine voided had reduced to two quarts, and the sugar to 2 per cent., acidity 64°, acetone and diacetic acid still present. On February 2 patient was allowed some popped corn and his sugar content went up to 3.5 per cent. Evidently cooked starch even in that form was bad, and it was strictly withheld until February 11, when another trial of popped corn was allowed, and the sugar went up to 5 per cent. It had been as low as 2/10 per cent., only 2.4 gram in 1200 c.c. urine in twenty-four hours on February 4. Only ten days before patient was secreting 150 grams of sugar in twenty-four hours, certainly a decided improvement. But as yet the sugar had never entirely disappeared, nor had the acetone and diacetic acid up to February 10, and the troublesome constipation still persisted. The popped corn was allowed with the hope that it might awaken the bowels, and the rise in sugar was not a surprise. But there was a surprise in store for us, in that on the next day the acetone had dropped to a mere trace, and the diacetic acid had disappeared entirely. Furthermore, the sugar took a sudden drop and an afternoon specimen of urine for February 12 showed no sugar whatever, the first time it had been entirely free. Furthermore, patient had his first free movement of the bowels next morning without the aid of glycerin injection.

A number of little changes in treatment led to this happy result. Up to a few days before, patient had been taking his citrates as juices of lemons, sour oranges and grape fruit. As his urine sugar continued to range between 2 and 4 per cent., some days up and some days down, I thought to test the lemons for sugar, and lo, there it was in considerable abundance. So we discontinued the lemons and grape fruit and substituted medicinal sodium citrate and straight citric acid dissolved in water and sweetened with saccharin. He dressed his lettuce and raw cabbage with citric acid sweetened with saccharin. I also prescribed magnesium citrate with the hope of helping his bowels. The results proved shortly that we were on the right track, for as stated above, by February 13, sugar, acetone and diacetic acid were all gone from the urine and patient was having free bowel movements. With the exception of a few brief and small recurrences of sugar associated with bread tests or allowances of apples and other fruits, patient has been entirely free of his diabetic troubles since the middle of February.

From a study of my six cases of acute diabetes I feel safe in presenting the following conclusions:

Continuous slow intake of carbohydrates is essential to a cure of diabetes.

The best mode of ingestion is as raw starch as presented in raw green vegetables at first with

all the meals, supplemented by as much raw corn-starch or flour stirred in water or well mixed with butter and spread on meats and eggs as the patient can stand, as shown by fecal examinations for undigested starch and by the rise or decrease of the sugar in the urine. Milk is inadmissible, as is also cooked starch of all kinds for the reason that they are too promptly digested in the stomach and turned to sugar before reaching the intestines. Sour milk and buttermilk are too rich in sugar to be safe in most cases.

Saccharin or granulose is a safe sweetening agent.

The secondary afflictions of diabetes, boils (one case), balanitis (two cases), stubborn constipation (one case), night urination (six cases), extreme weakness and fatigue (six cases), all clear up promptly under the raw-starch treatment, supplemented by such secondary aids as will readily suggest themselves.

While as in every disease every patient is a case in himself and requires close individual attention for the best results, yet the general principle of daily ingestion of raw starches and citrates is applicable to all diabetics, and to my mind goes a great way toward the solution of the difficulties of diabetes mellitus.*

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BACTERIN TREATMENT OF PUSTULAR ACNE AND FURUNCULOSIS

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During the last three years a large number of cases of pustular acne and furunculosis have come under my observation. Nearly all of the patients were university students, none being over the age of thirty.

Before accepting a case for treatment a definite understanding was had regarding the length of time the patient should be under observation, and a clear idea given to the patient concerning the nature of the treatment. These cases were treated for suppurating lesions, not comedones. No cases were given injections of bacterins without first determining the organism causing the suppuration.

In cases of true pustular acne staphylococci belonging to the *Staphylococcus albus* group were found in each instance. None showed *Staphylococcus aureus*. The furunculosis cases invariably gave *Staphylococcus aureus* findings.

* In the neighborhood of Herington, Kan., an unusual number of cases of diabetes are reported. Some months ago I outlined my raw-starch and citrate ideas to Dr. A. E. Harrison of Herington and asked him to give them a trial. He did so and in a recent letter dated June 6, 1913, he reports 20 cases in which he used the raw-starch method, "15 excellent results, 3 medium, and two doubtful."

Bacterins were made from isolated organisms and, for the most part, autogenous bacterins were used in the treatment.

The bacterins contained from three hundred thousand to a billion organisms to the cubic centimeter. No bacterins more than six weeks old were used.

The number of organisms injected and the intervals between injections varied with the case. Most cases, however, received an injection every ten days, usually beginning with an injection of two hundred million killed organisms and gradually increasing the dosage to five hundred million at an injection.

Since, in pustular acne cases, we are attempting to produce an immunity against a very chronic local infection, we cannot hope to do this by a single injection. As a matter of fact, real improvement rarely follows before six or seven injections are given. Little credit should be given the bacterin treatment if improvement follows the first or second injection, as cases become much improved at times without any treatment.

As an adjunct to the bacterin therapy, the patients were told to rub sulphur into the skin every few nights. The sulphur removes a great deal of the secretion of the sebaceous glands and perhaps prevents the formation of comedones as well as having some antiseptic action. Caution must be given regarding too frequent applications of the sulphur as the skin will become very dry. The bowels were regulated by various laxatives.

The following case histories show the plan of bacterin treatment and the results obtained.

Mr. E. J. B. Pustular acne, face, moderate. Culture, *Staph. albus*.

Injections given ten days apart. Began with two hundred million killed organisms, and gradually increased to five hundred million. Much improvement when fifth injection was given; only two pustules. Five other injections given; disappearance of pustules.

Mr. G. D. Pustular acne. Very severe on face and back. Patient had taken a series of stock vaccines a year previous with very little improvement. Culture, *Staph. albus*.

Injections given every seven days, beginning with two hundred million killed organisms. Considerable improvement followed the fifth injection. The injections were given in the back and the most marked improvement occurred in the region near the site of injections. Strength of bacterin gradually increased to five hundred million at each injection. Fifteen injections were given, at the end of which time only a few very small pustules remained.

Mr. W. H. W. Pustular acne of face. Small pustules on face for two years. Culture, *Staph. albus*.

Injections were given every ten days, beginning with two hundred million killed organisms at each injection, and gradually increasing to five hundred million. Disappearance of pustules after seventh injection. Three other injections were given.

Mr. L. E. M. Pustular acne of face, moderate. Culture, *Staph. albus*.

Injections were given every seven days, beginning with two hundred million killed organisms and gradually increased to five hundred million. Much improve-

ment followed the fifth injection. Thirteen injections were given. No pustules.

Mr. G. H. R. Pustular acne of back and neck; five years' standing. Very severe type with great amount of pus. Culture, *Staph. albus*.

Initial dose of two hundred million killed organisms given, gradually increasing dosage to five hundred million. The first eight injections were ten days apart; the remaining sixteen five days apart. Some improvement followed the eighth injection, but no great improvement until the twelfth. Gradual improvement with a final disappearance of all pustules.

Mr. F. E. B. Pustular acne of face. Very numerous small pustules. Culture, *Staph. albus*.

Injections began with two hundred million killed organisms gradually increasing until five hundred million were given each time. There was a ten-day interval between injections. Gradual improvement and disappearance of pustules. Ten injections were given.

Mr. A. K. Pustular acne of face and back; moderate. Culture, *Staph. albus*.

Injections began with two hundred million killed organisms, gradually increasing until five hundred million were given each time. Ten-day intervals between injections. Greatly improved, especially the back, after the seventh injection. Nine injections were given. A few comedones persisted but no pustules.

Mr. B. R. Recurrent furunculosis of face, neck and arms. Culture, *Staph. aureus*. Injections of two hundred million killed organisms (*Staphylococcus aureus*) were given at the beginning and dosage gradually increased to five hundred million. Twelve injections were given at ten-day intervals. No furuncles for six months. Then one occurred on right wrist. Same treatment repeated; no more infections have occurred.

Mr. B. O. Recurrent furunculosis, especially on back of neck. Culture, *Staph. aureus*.

Injections of two hundred million killed organisms (*Staphylococcus aureus*) were given. Dosage gradually increased to five hundred million. Ten-day intervals between injections.

A very small infected area occurred on back of neck after the sixth injection. Ten injections given.

All patients are told that the immunity resulting from the bacterin therapy will, perhaps, not prove permanent, and if other infections occur they should return for more injections.

The strictest antiseptic precautions have been used in administering these bacterins, and not one infection has followed several hundred hypodermic injections.

A HOSPITAL RECORD

Here is an entry from the records of the Kansas City General Hospital regarding a recent woman patient:

Woman 30 years old; mentally unbalanced; baby born at hospital May 5. Investigation showed this woman was once adjudged insane in Iowa and was committed to state hospital. She was discharged, married, and had three children before coming to Kansas City. Two of these are now in a school for feeble-minded in Iowa, the third is with a home-finding society. Her husband deserted her. After the birth of the baby here the woman became violently insane and was returned to Iowa. The baby is still at the hospital.

These four children, all of them probably feeble-minded, will be allowed to grow up to rear feeble-minded families in their turn, and their children to rear more feeble-minded families, and so on—unless society becomes sufficiently civilized meanwhile to put a stop to this sort of misery.—Kansas City Star.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

OCTOBER, 1913

EDITORIALS

DUES FOR 1914 — DELINQUENTS

County society secretaries are requested to note and all members are informed that the state assessment for 1914 will be \$3 for each member. The roster of each society as officially represented in the state secretary's office will be sent to the county society secretary about November 1, showing the members in good standing and the delinquents.

Members are in good standing when they pay the annual dues; these dues are payable on the first day of January each year; after that time those who have failed to pay are delinquent — not in good standing; they forfeit all privileges of membership and stand suspended until they meet this obligation. The fiscal year of the state association extends from January 1 to December 31, and every member who has not paid in advance automatically ceases to be in good standing after January 1. It is highly important, therefore, that secretaries collect 1914 dues as early in December as possible and forward them to the state secretary in order that due credit may be given and the 1914 certificates of membership be issued promptly.

Those who have not yet paid their dues for 1913 are delinquent and subject to the penalties brought on by their neglect; they stand suspended on the state association rolls and will be reported to the A. M. A. as not in good standing; they will be suspended as members and fellows of that body and deprived of all privileges of membership in the county and state societies. Those who are more than one year in arrears are in danger of being dropped from the rolls of the county, state and national bodies.

There are quite a number of members who have neglected to pay their dues this year. To all such we extend an earnest appeal to send their dues to the county secretary at once. Defense in malpractice suits is denied to members not in good standing; this privilege alone should be a sufficient stimulus to maintain good standing. After December 31 THE JOURNAL will be discontinued to those who have not yet met their obligations in this respect and their names will appear as non-members of the organization in the forthcoming edition of the Directory of the A. M. A.

Every member admitted to the ranks of the organization thereby assumes certain obligations that must not lightly be ignored. One of these obligations is to pay the dues promptly—surely not an onerous burden. Another duty is to attend the meetings regularly and bear his part of the responsibility of maintaining the activities of the society for the advancement of the profession and the instruction and protection of the people in health problems.

Membership in the organized profession is a privilege that should be jealously guarded by every physician of good professional repute. The numerous activities of the county, state and national bodies reflect great credit on the individual physician. To disregard these societies and remain apathetic to the progressive spirit of the medical profession of to-day is an unwise and imprudent attitude for any physician to assume who pretends to a life of professional and civic activity in harmony with the high ideals of a profession sensible of its obligations and duties to the people and to its members.

A GOOD MOTTO

When the state of Missouri ninety-one years ago adopted as its motto, and incorporated in the great seal of the state, *salus populi suprema lex esto*—"the health of the people is the supreme law"—the significance of this utterance may have been fully appreciated by the makers of the seal, but in the intervening years the health of the people has been about the last thing the law paid any attention to. The motto, however, still graces the face of the great seal of the state. Perhaps the trend of the times indicates that it will be more seriously observed in the future than it has in the past.

As a profession and as an organization we have for many years preached that good health and the prevention of disease should be among the first thoughts of the people. The propaganda to promote public health has brought many agencies into cooperative activity, so that in the last few years probably the great majority of the people have become more or less familiar with the causes and modes of transmission of some of the more common diseases and possessed of a fair knowledge of how to assist in preventing them.

Unfortunately, the prevention of disease among humans can be a successful undertaking only with the expenditure of much money; but the appropriation of adequate sums for this purpose by state and municipal governments will never be readily granted until public sentiment has been aroused to a full realization of the benefits of good health not only in the individual, but in the community. In this work of creating public sentiment there is no agency so potent and far-reaching as the newspapers. To them comes the opportunity in this day of health conservation

of playing the chief rôle in creating a deeper and truer appreciation of the value of good health. Some of the newspapers have been devoting considerable attention to this work, notably the *Kansas City Star*, but what is needed is a decided and definite crusade for reform, reconstruction and information. The medical profession will continue its public-health activities, but its influence is necessarily limited when working alone; only through wide publicity in the daily press can the people obtain a proper understanding of the possibilities of attaining good health conditions.

The *St. Louis Republic* has given considerable space to health problems recently, but it has now entered on a larger campaign, with the motto to make St. Louis the "healthiest city." It was prompted in this laudable effort on discovering that the death-rate in St. Louis was considerably less than in other large cities similarly situated and lower than in some cities much more favorably located. According to the plan announced, a regular crusade will be conducted to teach the people to observe the hygienic and sanitary laws and endeavor to stimulate sentiment for maintaining healthful living conditions. In this work the *Republic* has enlisted and received the promise of support from the mayor, the health department, St. Louis Medical Society, the police department and numerous mercantile establishments and civic organizations. With such an array of influential bodies cooperating for the accomplishment of the purpose the success of the undertaking is assured.

The same sort of campaign ought to be inaugurated in each of the large centers of population in the state, each striving to educate the people in that community how to make their city a healthier and cleaner place for human habitation. With such influences cooperating for the protection and conservation of human health and life, the motto of our great state may rise from the dust of hurried years and become a forceful power for good — *salus populi suprema lex esto*.

TEACHERS OF MEDICINE

A decade ago St. Louis had many more medical schools and many more professors of medicine than it has now, yet in the aggregate of material there were practically no men who made a business of teaching medicine, save as a sideline.

Then the St. Louis University, having taken over the Marion Sims-Beaumont School of Medicine, attempted what seemed at the time a radical step in medical education. They organized the first two years of instruction on a real laboratory basis, with paid men at the head of these fundamental departments, who should give all their time to teaching and research. To accom-

plish this purpose it was necessary to obtain properly trained men from other cities. This was done. Two of these men were not even doctors of medicine; they were biologists in the broadest sense of the word and, moreover, teachers. Opinions of this heresy were freely expressed, for all this was a long time ago and it seemed a curious thing to intrust a year or two of a medical student's life to men who had never practiced medicine and who probably didn't know the difference between *nux vomica* and *cannabis indica*.

However, a new era in medical education had begun for St. Louis. A new spirit had entered into local medical affairs; a spirit that has resulted in giving to St. Louis in the last ten years a reorganization of its municipal hospital system, that has established research hospitals like the Barnard Free Skin and Cancer Hospital, and finally has culminated in the new Washington University Medical School and Barnes Hospital group, which will make the city of St. Louis one of the real medical educational centers of the country.

We do not wish to indicate that the two men of whom we are writing did all these things themselves, but we do wish to emphasize the importance of their type in this process of medical fermentation. They were just the men needed at the time. E. P. Lyon and A. C. Eycleshymer brought with them to St. Louis the research spirit. They were investigators. Their laboratories immediately became workshops. Young men were put to work on medical problems. The forward pass took the place of the old army game inside the buildings as well as on the football field. But fortunately these men were not only research men, they were teachers and organizers as well. They did not sacrifice the interests of the school as a teaching institution to their own advancement; they carried the school along with them.

When Dr. Lyon became dean of the school he was not content to remain a mere figurehead, satisfied with the dull routine of such a position. Instead, he turned on this position that same search-light of investigation that his laboratory training had fitted him to apply to all problems. He became a specialist in medical education. He learned what other schools were doing or trying to do, and gradually began to build wisely for his own school. The days when a man could enter a medical school on a certified check and a letter from the village schoolmaster were rapidly passing. Realizing the difficulties that many of the men had encountered in getting the required preliminary education, Dr. Lyon organized a collegiate medical year, in which modern language, physics, biology and chemistry were taught in a medical environment. Here again was a new thing for St. Louis, a five-year medical course.

But this is neither a biography nor an obituary of Dr. Lyon and Dr. Eycleshymer. These can be

written after they are dead in order to save them any possible embarrassment, for they are modest men. What they have done for St. Louis remains as a permanent culture, fermenting in the new medical schools and in the hospitals of our city, which are ceasing more and more to be mere hotels for the sick, but are giving space to laboratories as well as operating-rooms. What these men have done for medical science can be read in "Who's Who" or "American Men of Science." We write this little article merely to express two sentiments. We are sorry they have left St. Louis; we still need them, for there is work yet to do, and always will be work for men of this type. But we are proud of the fact that two of our sister states, Minnesota and Illinois, have come to St. Louis for men, especially when, with practically unlimited funds, they were looking for the very best men, and St. Louis, which was not on the medical map ten years ago, was able to furnish them.

OBITUARY

JOHN P. PARDUE, M.D.

Dr. John P. Pardue of St. Louis, a graduate of the Missouri Washington University Medical Department, 1879, died at his home August 29, from nephritis; aged 61.

ZOPHAR CASE, M.D.

Dr. Zophar Case of Warrensburg, a graduate of Washington University Medical School, 1875, member of the Johnson County Medical Society, the Missouri State Medical Association and fellow of the American Medical Association, died at his home September 14; aged 66.

EVERETT L. DAY, M.D.

Dr. Everett L. Day of St. Louis, a graduate of the Barnes Medical College, 1906, died at his home August 29; aged 35. Before his graduation he served in the hospital corps of the United States Army in the Philippines during the Spanish-American War. He was a native of Palmyra, Ill.

L. D. McKEE, M.D.

Dr. L. D. McKee of Wayland died at his home in September, aged 69. He was a member and president at the time of his death of the Clark County Medical Society and a member of the Missouri State Medical Association. He graduated from the College of Physicians and Surgeons of Keokuk, Iowa, 1881, and had practiced in Wayland for many years.

ALPHONSO H. MADRY, M.D.

Dr. Alphonso H. Madry of Aurora, a graduate of the University of Louisville, 1886, died at his home August 24, from disease of the lungs. He was a member of the Lawrence-Stone County Medical Society, the Missouri State Medical Association and fellow of the American Medical Association; Councilor of the 28th District of the State Medical Association, president of the Southwest Missouri Medical Association and local surgeon for the Kansas City, Fort Scott and Memphis Railway. He was 53 years old.

JOHN A. EATON, M.D.

Dr. J. A. Eaton of Belgrade died at his home, May 6, from nephritis, aged 69. He graduated from the Missouri Medical College (now Medical Department of Washington University) in 1892. At the time of his death he was the representative of his county in the state legislature and served in the 1911 session. He served the interests of his community conscientiously and faithfully and was held in the highest esteem by the members of the general assembly. All his acts were governed by that honesty of purpose and rectitude of decision that characterized all his dealings. He was a firm supporter of the higher ideals in medical and sanitary laws and championed every measure that contributed to the safeguarding of the health of the people.

CHARLES B. HARDIN, M.D.

Dr. Charles B. Hardin of Kansas City died Aug. 31, 1913. He was born in Lafayette County, Missouri, Aug. 30, 1857. In 1881 he graduated from the Kansas City Medical College, now merged with the Medical Department of the University of Kansas. After his graduation he practiced a year with his preceptor, Dr. John Bryant of Independence, Mo. In 1882 he entered Bellevue Hospital Medical College, from which he graduated in 1883, after which he returned to Independence, where he was located until 1888, when he came to Kansas City. Since then he was actively and continuously engaged in his professional work until the last year or two of his life, when he was in such poor health that he could respond to but few of the calls that came to him. He was a member of the Academy of Medicine, of which he was an ex-president. He was for many years professor of hygiene and state medicine in the Medico-Chirurgie College, an ex-president of the Jackson County Medical Society, member of the Missouri State Medical Society and a fellow of the American Medical Association.

Dr. Hardin was a painstaking practitioner and was beloved by his many patients. He was genial, companionable and always a gentleman. This society will miss him much, and it greatly mourns its loss in his death. We extend our weak words of sympathy to his family in their dire bereavement. — *Bulletin* Jackson County Medical Society.

NEWS NOTES

DR. GEO. H. JONES, formerly of Kansas City, has been appointed state bacteriologist.

DR. T. O. KLINGNER of Springfield has been appointed to fill the position of Councilor of the 28th District, left vacant by the death of Dr. A. H. Madry of Aurora.

DRS. F. H. SPENCER, J. B. REYNOLDS and J. B. OWENS of St. Joseph, and Dr. J. H. ELLIOTT of West Plains have been appointed pension examining surgeons.

DR. MURRAY C. STONE, formerly state bacteriologist, has moved from Jefferson City to 524 Woodruff Building, Springfield, Mo., where he will conduct a laboratory of pathology and bacteriology.

DR. E. H. MILLER of Liberty, president of the association, delivered an address on "Preventive Medicine" before a large audience at Bethany at a public meeting conducted under the auspices of the Harrison County Medical Society.

DR. H. P. MILLS, formerly assistant physician and pathologist at State Hospital No. 2, St. Joseph, has accepted the position of assistant physician and pathologist on the staff of the Arizona State Hospital at Phoenix, Ariz.

THROUGH an oversight the name of Dr. Dan W. McGee of Mountain Grove was omitted from the list of charter members of Wright County Medical Society in the September issue, and the address of Drs. E. L. and John J. Evans was given at Mountain Grove, whereas it should have been Manes.

ST. JOSEPH recently adopted an ordinance creating a sanitary district in the most thickly populated section of the city. In this district it is now unlawful for any person to maintain a privy-vault or cess-pool without sewer connection, where such connection can be made within the sanitary district.

DR. HANAU W. LOEB of St. Louis has been elected dean of the St. Louis University Medical Department. New members of the faculty are: Dr. A. H. Pohlman, formerly of the University of Indiana; Dr. Don R. Joseph, formerly of Bryn Mawr, and Dr. Albert Kuntz, formerly of the University of Iowa.

THE State Board of Health revoked the license of Dr. Edward Andrus of Holden, Johnson County, for eighteen months for sending illegal literature through the mail; the federal grand jury had previously found him guilty of this offense and assessed a heavy fine. The license of Dr. H. F. Mikel of Columbia was revoked for six months for illegal writing of whisky prescriptions.

THE following articles have been accepted for inclusion with New and Nonofficial Remedies:

Abbott Alkaloidal Co.:

Aene Bacterin, Polyvalent.

Coli Bacterin, Polyvalent.

Friedlander Bacterin, Polyvalent.

Gonococcus Bacterin, Polyvalent.

Pneumo-Bacterin, Polyvalent.

Staphylo-Bacterin, Polyvalent.

Staphylo-Albus Bacterin, Polyvalent.

Staphylo-Aureus Bacterin, Polyvalent.

Staphylo-Bacterin (Human) Albus, Aureus and Citreus.

Strepto-Bacterin (Human).

Typhoid Prophylactic.

Slee's Antistreptococcus Serum.

Slee's Antimeningitis Serum.

Slee's Normal Serum.

Typho-Bacterin, Polyvalent.

Herman Barker:

Barker's Gluten Food A.

Barker's Gluten Food B.

Barker's Gluten Food C.

Farbwerke-Hoechst Co.:

Ninhydrin.

Placentapeptone.

Lederle Laboratories:

Rabies Vaccine.

Merek & Co.:

Copper Citrate.

Having announced that the advertising claims now made by the Sophian-Hall-Alexander Laboratories will be adhered to by E. R. Squibb & Sons, the Council voted that the acceptance of the products described in *The Journal of the American Medical Association*, April 5, 1913, p. 1074; April 19, 1913, p. 1227, and Sept. 6, 1913, p. 771, be allowed to stand.

CORRESPONDENCE

AMBULANCE SERVICE IN ST. LOUIS

To the Editor:—Noting your editorial mention last month on ambulance surgeons, permit me to say that this service was begun in St. Louis more than twenty years ago, as will be seen from an examination of the Seventeenth Annual Report of the Health Commissioner, pp. 17, 44-62. That a service so plainly in the interest of prevention of human suffering and the saving of life should have been discontinued is a serious commentary on local municipal officialism.

GEORGE HOMAN, M.D.

St. Louis, Sept. 25, 1913.

GOAT'S MILK IN PYLORIC SPASM

St. Louis, Mo., Sept. 20, 1913.

To the Editor:—Goat's milk has afforded the maximum of nourishment coupled with the minimum of pain, bloating and freedom from constitutional symptoms of food toxins in a case of extremely distressing pyloric spasm. A patient, after nine years of agonizing pain, violent nausea and severe bloating (gastric and epigastric) incident on eating food of any kind, tried goat's milk and found it to be of incalculable value in a severe and puzzling case.

Patient, on taking goat's milk, presented a remarkable and immediate physical reaction in the gastric and epigastric region, viz., relaxing of gastric and epigastric wall from severe distention to normal; marked dropping of pulse from about 90 to 65, and free breathing; in a very few days a noticeable change for better of the general symptoms of sluggishness, numbness and intense irritability; patient expressing a sense of being sustained, having greater strength and an abatement of continuous sense of gnawing hunger. The waist line dropped to 24 inches—compressive to 22 inches—for the first time in seven years; formerly, waist line was 27 to 32 inches.

Length of time, to date, of test: Began July 29, 1913, to Sept. 26, 1913, in a post-exploratory operative case, eight years since last operation. A severe pyloric stricture was found of benign character and congenital origin; operated on at age of 25 years.

At age of 5 or 6 years first remembered an attack of acute, violent stomach pain. Patient is of vigorous constitution.

Hoping this may prove of value to others. I suggest its trial in cases of gastric irritability, whether of organic or nervous origin; also in cases of digestive disturbance, where other forms of food have proved of little or no avail.

MARY BARNES FAUTLERoy, R. N.

4148 Morgan Street.

MISCELLANY

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA, CHICAGO, NOV. 10-15, 1913

Dr. Albert J. Ochsner, the first president of the Congress, was selected as Chairman of the Committee on Clinical Programs for the fourth session of the Congress, and under his supervision an attractive program has been provided. Every clinician of ability and reputation in Chicago will be ready to do his share in entertaining the hundreds of guests who are expected to attend. A complete showing of this city's clinical facilities will be made. Every branch of surgery will be represented in the program: gynecology, obstetrics, genito-urinary surgery, orthopedies, surgery of the eye, ear, nose, throat and mouth. One will find enough actual surgical work in any one of the specialties to keep him busy each day of the session. In addition to clinics in operative surgery, a large number of special demonstrations in radiology, experimental surgery, surgical pathology, etc., will be provided. We publish below the program of evening sessions: the clinical program may be obtained from Dr. F. H. Martin, secretary, Chicago.

PROGRAM OF EVENING SESSIONS

GENERAL SURGICAL DIVISION

Presidential Meeting, Monday, November 10, Orchestra Hall

Edward Martin, Philadelphia: Address of Retiring President. Inauguration of President Brewer. Brief Addresses by Presidents of the National Medical Societies.

George Emerson Brewer, New York City: A New Method of Pyloric Closure in Gastro-Enterostomy.

Harvey Cushing, Boston: A Report of a Series of 150 Gasserian Ganglion Operations. Discussion by John B. Murphy, Chicago.

Tuesday, November 11, Orchestra Hall

Sir W. Arbuthnot Lane, London: Title of paper to be announced.

Herbert J. Paterson, F.R.C.S., London: The Operation of Gastrojejunostomy and the Principles Which Should Determine Its Use. Discussion by Carl Beck, Chicago.

John B. Deaver, Philadelphia: Gastric Hemorrhage. Discussion by A. J. Ochsner, Chicago.

Wednesday, November 12, Gold Room, Congress Hotel

Professor Doetor Krönig, Freiburg, Germany: The Radio-Therapeutic Treatment of Benign and Malignant Tumors. Discussion by Howard Kelly, Baltimore, and C. J. Gauss, Freiburg, Germany.

Roswell Park, Buffalo: On the Relation of the Ductless Glands to the Work of the Surgeon. Discussion by Dean D. Lewis, Chicago.

John F. Binnie, Kansas City: Some Uses of Fat in Surgery. Discussion by Jasper Halpenny, Winnipeg, Manitoba.

Cancer Meeting, Thursday November 13, Orchestra Hall

Thomas S. Cullen, Baltimore: (a) Report of the Cancer Campaign Committee of the Clinical Congress of Surgeons of North America. (b) The Diagnosis of Cancer of the Uterus.

Mr. Samuel Hopkins Adams, New York City: Publicity Through the Lay Press.

Edward Reynolds, Boston: Publicity and Education Through the American Society for the Control of Cancer.

Frederick R. Green, Chicago: Publicity and Education Through the Council on Health and Public Instruction of the American Medical Association.

Mr. Frederick L. Hoffman, Newark: The Educational Value of Cancer Statistics to Insurance Companies, the Public and the Medical Profession.

James Ewing, New York City: The Relation of the Pathological to the Surgical Diagnosis in Cases of Cancer.

William J. Mayo, Rochester, Minn.: Cancer of the Stomach and Colon.

C. J. Gauss, Freiburg, Germany: The Radio-Therapeutic Treatment of Carcinoma.

Joseph C. Bloodgood, Baltimore: A Very Recent Investigation of the Outcome of the Cases of Cancer Recorded in the Johns Hopkins Hospital and the Surgical Pathological Laboratory. (Lantern Demonstration.)

Friday, November 14, Gold Room, Congress Hotel

Hugh Cabot, Boston: The Diagnosis of Lesions of the Upper Urinary Tract. Discussion by Arthur Dean Bevan, Chicago.

J. M. T. Finney, Baltimore: Fourteen Years' Experience with the Operation of Pyloroplasty. Discussion by E. Wyllys Andrews, Chicago.

Charles H. Mayo, Rochester, Minn.: A Summing-Up of the Goiter Question. Discussion by George W. Crile, Cleveland.

DIVISION OF SURGICAL SPECIALTIES

*Tuesday, November 11, Louis XVI Room,
Hotel Sherman*

Edward Jackson, Denver: Operations on the Extra-Ocular Muscles. Discussion by C. H. Beard and George F. Fiske.

Harold Gifford, Omaha: Sympathetic Ophthalmia. Discussion by E. V. L. Brown and J. B. Loring.

Robert H. Elliott, M.D., F.R.C.S., Lt.-Col. I. M. S. Superintendent Government Ophthalmic Hospital, Madras, India, will also address the meeting.

*Wednesday, November 12, Louis XVI Room,
Hotel Sherman*

G. Hudson-Makuen, Philadelphia: Surgery of the Faucial Tonsil as it Relates to the Functions of the Tongue and Soft Palate in the Production of the voice. Discussion by W. E. Casselberry and Elmer Kenyon.

V. P. Blair, St. Louis: Peridental Infections: Their Relation to Neighboring Organs. Discussion by Arthur D. Black and Herbert A. Potts.

Friday, November 14, Louis XVI Room, Hotel Sherman

Fred Whiting, New York City: The Indications for the Radical Mastoid Operation with the Steps Essential to Successful Healing. Discussion by Frank Allport and Joseph Beck.

Philip D. Kerrison, New York City: The Surgical Treatment of Suppurative Labyrinthitis. Discussion by George E. Shambaugh and J. Gordon Wilson.

THE AMERICAN COLLEGE OF
SURGEONS

On the evening of Nov. 13, 1913, will be held the first formal meeting for the conferring of fellowships on the members of the American College of Surgeons.

Sir Rickman Godlee, the president of the Royal College of Surgeons of England, will deliver the principal address and extend, officially, greetings to our new organization from the councillors of the Royal College of Surgeons.

President J. M. T. Finney will deliver the presidential charge and formally confer the fellowships on all members of the organization who have qualified. Honorary fellowships will be conferred on a small number of foreigners and Americans whom the Board of Regents have selected as worthy of such distinction.

PROGRESS OF ORGANIZATION

About thirteen hundred applications for fellowship in the American College of Surgeons have been filed with the secretary. Of this number of applicants only about ten hundred have fulfilled all the requirements in filing their application blanks.

The Board of Regents approved about four hundred men at its Minneapolis meeting. Three hundred additional have been favorably passed on by the General Committee on Credentials and will be recommended to the regents for final approval at their next meeting in October.

There is an inclination on the part of some men to take it for granted that certain groups of members should be exempt from filing declaration blanks and giving data and references. The regents have ruled that all applicants shall file the same papers, and be submitted to the same scrutiny before they can be recommended for fellowship.

The work of scrutinizing each application and verifying all references on the part of the Committee on Credentials takes much time, hence, prospective fellows must not become impatient if the announcement is delayed.

MISSOURI STATE BOARD OF
HEALTH

A committee consisting of Drs. Matthews, Cuppidge and Adeock met in Kansas City, September 2, at the Central High School and conducted examination of applicants for licenses to practice medicine and surgery. Thirty-eight took this examination and four midwives took the examination also.

On September 5 the entire Board met at the Coates House to transact business pertaining to the Board.

After transacting some routine business the case of Dr. F. J. Mikel of Columbia, Mo., was called. The charge against him was writing illegal prescriptions for intoxicants. The evidence was his conviction in the Circuit Court of Boone County. The doctor was present and testified in his own interest. No witnesses were present on either side. The Board, by unanimous vote, decided he was guilty of the charges, and, by unanimous vote revoked his license for six (6) months.

The next case was that of Dr. Edward Andrus of Holden, Mo. He was present with his attorney, Mr. Max Aber of Warrensburg, Mo. The charges against him were unprofessional, dishonorable conduct in sending unlawful literature through the mail. The evidence against him was his conviction in the United States Court, pleading guilty to the charges and paying his fine. A number of witnesses were present certifying to the good character of Dr. Andrus, and his attorney presented petitions signed by a large number of people in Holden and throughout the county asking leniency on the part of the Board. In executive session the Board voted unanimously that the doctor was guilty of the charges and also voted unanimously that his license be revoked for eighteen (18) months.

The case of Dr. W. P. Brewer of Fair Play, Mo., was called, he being summoned to appear before the Board to show cause why he should not be subpoenaed to appear at a later meeting of the Board for revocation of license for unprofessional and dishonorable conduct in that he was writing illegal prescriptions for intoxicants. The doctor was present and testified in his own behalf, claiming ignorance in most of his work in writing prescriptions for intoxicants, claiming he did not know it was in violation of the statutes. He promised the Board he would not write any prescriptions for intoxicants hereafter if the Board would not summon him for revocation of license for the work already done. Further proceedings were suspended on good behavior.

A SCHOOL THAT GIVES LIFE

During its second year, which has just closed, the Open-Air School, conducted by the Society for the Relief and Prevention of Tuberculosis, has discharged twenty-seven children cured. The total cost of the school during the past year has been \$2,998.29. The average price of those twenty-seven priceless good-health diplomas is \$124.29.

This school is able to care for only twenty-seven pupils. It has a waiting list right now of 129. Nobody knows how many of those pupils eager to enter the school could be graduated into

Good Health. But from the results of the past year it is fair to think that a great many of them could attain that degree. And for a certainty they should be given a chance.

It ought to be possible to endow this school so that it can accommodate a great many more pupils. It has demonstrated the efficiency of its methods. It has shown that the cure of tuberculosis is no longer a theory, but a splendid fact. Here is an institution that fights death and beats it. But its victory is limited because of lack of funds.

St. Louis is justly proud of its schools. They are the finest in the country. Occasionally, St. Louis drops its modesty and boldly asserts that fact. We pay the cost of those schools cheerfully, and for every dollar invested we get big returns. Great as those schools are their work cannot be mentioned in comparison with the work of this school that cures tuberculosis. This school stands out vitally alone. Preparation for life's labor is a great thing, but this school gives life itself.

Consider well that waiting list. There are 129 of them. If we furnish the means the school will do the work. We cannot afford to fail in this. The money must be forthcoming. — St. Louis *Republic*.

Since July 1 the following articles have been accepted for inclusion with New and Nonofficial Remedies:

Lederle Antitoxin Laboratories.

Acne Vaccine.

Pertussis Vaccine.

Meningococcus Vaccine.

Coli Vaccine, 20 c.c. vials.

Gonococcus Vaccine, 20 c.c. vials.

Pneumococcus Vaccine, 20 c.c. vials.

Staphylococcus Vaccine, 20 c.c. vials.

Staphylococcus Albus Vaccine, 20 c.c. vials.

Staphylococcus Aureus Vaccine, 20 c.c. vials.

Streptococcus Vaccine, 20 c.c. vials.

Typhoid Vaccine, 20 c.c. vials.

H. M. Alexander & Co.

Tetanus Antitoxin.

Knoll & Co.

Digipuratum Ampules.

Digipuratum Solution for Oral Use.

Comar & Co.

Electr-Hg.

Cutter Laboratories.

Acne Vaccine.

Coli Vaccine.

Pneumococcus Vaccine.

Pyocyaneus Vaccine.

Staphylococcus Vaccine.

Streptococcus Vaccine.

Typhoid Vaccine.

Typhoid Prophylactic Suspension.

Farbwerke-Hoechst Co.

Melubrin.

Lederle Laboratories.

Scarlet Fever Treatment.

Scarlet Fever Prophylactic.

Antigonococcus Serum, 10 c.c. syringe.

Antimeningococcus Serum, 15 c.c. cylinder.

Antistreptococcus Serum, 10 c.c. syringe.

Antistreptococcus Serum, 50 c.c. cylinder.

Antipneumococcus Serum, 10 c.c. syringe.

Antipneumococcus Serum, 50 c.c. cylinder.

Normal Horse-Serum, 10 c.c. syringe.

Normal Horse-Serum, 100 c.c. vial.

National Vaccine and Antitoxin Institute.

Antityphoid Vaccine (Immunizing).

Sophian-Hall-Alexander Laboratories.

Whooping-Cough Vaccine.

SOCIETY PROCEEDINGS

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI

The society began its regular sessions after the summer vacation on Thursday, September 11. The meeting was held in the parlors of the St. Louis Medical Society and the following program rendered: "The Use of the Giant Magnet in General Practice," by Dr. W. H. Luedde. "The Construction of a Giant Magnet," by Dr. P. I. Chandysson.

On October 2 the society met at the City Hospital. The program for this meeting consisted of the following: "Our Municipal Dispensary Service, Its Organization, Aims, Etc.," by Dr. Rolla Henry. "An Experience in Private Practice," by Dr. H. C. Kloepper; five-minute talk. "Personal Experience in General Practice," by Dr. Geo. W. Koenig; five-minute talk. "Brief Report of Two Cases, Illustrating the Problem of Private Practice," by Dr. C. W. Gaertner; eight minutes. "Tubercular Epididymitis: Brief Discussion of Subject and Case Report," by Dr. H. McC. Young.

ST. LOUIS MEDICAL SOCIETY

St. Louis Medical Society resumed its regular meetings September 20, with a good attendance, there being 118 members present. The excellent programs that have been presented in this society during the past two years show that the membership of a society can be interested by the presentation of instructive programs. At the opening session President Behrens urged the members to greater activity, not only in the scientific work of the society but in its duty as a civic body toward influencing a higher regard for the public safety in health conservation. His message follows:

"Fellow Members:—We are entering on the last one-third of the 1913 work of our society. The two-thirds period, until June, all must admit, has been an extremely active one for officers and members. Our programs were always of a high standard and thoroughly appreciated, manifested by large attendance at every meeting.

"The membership, ethics, publication, public health and instruction—in fact, all committees have had active service, and, in fact, some are overtaxed with the work demanded by our large organization. It is gratifying to say none have shirked their duty.

"Notwithstanding this apparent par excellent condition of our society, in summing up, after due consideration and deliberation, thoroughly appreciative that we are running along at rather a high tension, it seems there is still more work beneficial to our profession before us, and it is to be hoped that you approve of the following suggestions by earnest endeavor to right the wrongs or aid in so doing:

"1. Contract practice is assuming an abusive phase, tending toward lowering the dignity of our profession, cheapening and degrading it, and in time the future physician will be the intelligent servant of the ignorant commercial corps that hire men to do their bidding.

"2. The dispensary, college, hospital clinic abuse is assuming disgusting proportions and should be righted. Imposition is tolerated in medicine that no charity, business or institution would permit. The poor deserve our best efforts. There is no sense in feeling that those able to pay should come under the poor classification, or be admitted as such, to our clinics, just to be doing something.

"3. Our newspapers are permitting 606-914, whirling sprays, intimating ads on abortion, lying-in homes and other unsafe matters to creep into their advertising pages. Many deluded are supposedly given 606, pronounced and believe they are cured of syphilis, marry, etc. It seems our newspapers do not understand the damage they are doing by opening their pages to such. Perhaps we can send a committee to argue and convince.

"4. There is too much bichloride sold for safety sake. It is too much effort to save such would-be suicides. We should either aid in making it harder to obtain or else educate people to take a quicker route.

"It seems that a committee of three or five should be appointed to investigate and report to our society in December, say the 13th or 20th, for the society's action.

LOUIS H. BEHRENS."

An unexpected but most welcome gift came to the society recently in the bequeathment of the residuary estate of the late Mrs. Francisca Bartscher, mother of Dr. Hugo Bartscher, a deceased member. The bequest is estimated at about \$35,000. Concerning this gift the *Bulletin* of the society says:

"According to the records of the probate court our society becomes the residuary legatee in the will of Mrs. Francisca Bartscher, who was the mother of our deceased member, Dr. Hugo Bartscher.

"A photo of Dr. Bartscher hangs on the south wall of our auditorium and was presented by his mother to us. The interest manifested by her in the future welfare of our society is evidenced by the provision in her will making us one of her beneficiaries. Without condition, she requests that we accept all the residue of her estate for the purpose of equipping the Hugo Bartscher room, in which is to be hung the aforementioned portrait.

"Such generosity is indeed a most pleasant and agreeable as well as a welcome surprise, and we know will be not only acceptable to our society but will be used to good advantage. Of course we will come into possession of this money for one year, at which time a settlement of the estate will be effected. Speculation is already ripe as to just what use this large fund will be put, and the council has taken steps to protect our interests in the probate court, and no doubt will consider ways and means for the proper disposal of this fund. We may be presumptuous in saying that at this early date suggestions are in order, and such may be appropriately made to our council. Would this fund of approximately \$35,000 not serve handsomely as a nucleus for a building fund for a new home for the St. Louis Medical Society? Many members will be glad to contribute to such a fund generously, in order that we may have a St. Louis Academy of Medicine and home

of which we can justly be proud and which should be second to none of its kind in this country.

"The attitude of our council in this regard will be watched with keen interest by all of our members. May we express a hope that in the future there may be more donors to our society such as Mrs. Francisca Bartscher has been?"

Following are the programs already prepared for the fall work:

Saturday, Sept. 20, 1913.—"Demonstration of a Case of Acromegaly with Operative Results," Dr. W. E. Sauer. "An Interesting Case," Dr. Walter Hewitt. "Pathological Specimens—Carcinoma of the Sigmoid Flexure of the Colon," Dr. Horace W. Soper. "Cancer of the Stomach, with Complete Occlusion of the Pylorus," Dr. N. B. Carson. "A Brief Report from the Buffalo Congress of School Hygiene," Dr. A. H. Meisenbach.

Saturday, Sept. 27, 1913.—"Studies of Endocarditis and Rheumatism" (by invitation), Dr. E. C. Rosenow, Chicago, Ill.

Saturday, Oct. 4, 1913.—"Reports of International Congress of Medicine and Surgery, held recently in London," by several members of this society.

Saturday, Oct. 11, 1913.—Symposium on Inheritance. 1. "Some Recent Development in the Analysis of Inheritance" (by invitation), Dr. J. F. Abbott. 2. "The Principles of Heredity with Regard to the Common Diseases," Dr. Frank Hinchey. 3. "The Problem of Inheritance in Nervous and Mental Diseases," Dr. Sidney I. Schwab.

Saturday, Oct. 18, 1913.—"Practical Methods of Differentiating Active Tubercular Lesions and Healed or Quiescent Ones" (by invitation), Dr. F. M. Pottinger, Monrovia, Cal. Discussion to be opened by Dr. Albert E. Taussig and Dr. O. H. Brown.

Saturday, Oct. 25, 1913.—Program arranged by the Section on Obstetrics and Gynecology. "The Abderhalden Test in the Sero-Diagnosis of Pregnancy and Cancer," Dr. Henry Schwarz, Dr. Philip N. Schafer.

Saturday, Nov. 1, 1913.—Symposium on Laboratory Aids in Medical and Surgical Diagnosis.

Visiting physicians are cordially invited to attend all meetings of the society. Sessions are held in the society auditorium, 3525 Pine Street.

THE GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in Meta, September 18, with afternoon and night sessions.

The following doctors were present: W. S. Allee, Olean; F. Aufder Heide, Drake; C. A. Bunge and J. D. Seba, Bland; J. E. Jose, Owensville; O. H. Brown, St. Louis; M. E. Spurgeon, Red Bird; John Underwood, High Gate; J. J. Rademacher, Meta; A. J. Crider, Freeburg, and H. G. Isenberg, Van Cleave.

The following program was rendered in the afternoon: J. J. Rademacher read a paper on "Perineorrhaphy." M. E. Spurgeon read a paper on "Adherent Placenta." C. A. Bunge read a paper on "Scarlet Fever." O. H. Brown gave a lecture on "Diet in Fevers." All the subjects were discussed.

The night session was open to the public and a large attendance greeted us. Drs. Allee and Brown delivered lectures. Dr. Allee on "Medical Legislation a Safety to the Public," and Dr. Brown spoke on "The Prevention and Cure of Tuberculosis."

The audience joined in a rising vote of thanks to Drs. Allee and Brown for their interesting and instructive lectures.

After the close of the public session Dr. John D. Seba read a paper on "Typhoid Vaccination," which was discussed by all the doctors present.

The meeting adjourned to meet next at Bland, Dec. 18, 1913.

JOHN D. SEBA, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met in the office of Dr. Hawkins at Glasgow, September 5, Dr. T. J. Payne, vice-president, in the chair.

No clinical cases were reported.

Drs. A. V. Moore and M. R. Smith, who were on for papers, were absent, so they were retained on the program for the October meeting.

Dr. C. H. Lee reported for the Hospital Committee.

Dr. Hawkins read a letter from the secretary of the Missouri State Medical Association defining our relations to the American Medical Association and the State Medical Association. After October, 1913, the state dues will be \$3 and all members will be members of the American Medical Association as well as the State Medical Association. However, to be recognized as fellows of the American Medical Association and to receive *The Journal of the American Medical Association* there is an additional sum of \$5 required.

There was an informal discussion of post-partum hemorrhage, and of resection of femur in shortening.

The society was well entertained by the doctors of Glasgow and the session was very pleasant and profitable.

Adjourned at 4 p. m. to meet at Fayette the first Friday in October. C. W. WATTS, M.D., Secretary.

The Howard County Medical Society met at 2 p. m. Friday, October 3, Dr. T. J. Payne, vice-president, in the chair.

The members present were Drs. Megee, Wright, Champion, Burgwin, Lewis, Payne, Wood and Watts. The minutes of the meeting at Glasgow were read and approved. Drs. Moore and Smith, not being present, were held over for the November program.

The members of the Hospital Committee, not all being present, were asked to make their report at the November meeting, and the secretary was requested to notify all members to be present.

The secretary read a very interesting letter from our state secretary which was highly complimented and he was invited to come and see us at his convenience.

The application of Dr. C. B. Lawrence, Fayette, was reported favorably by the board of censors and he was duly elected to membership.

Dr. A. B. Burgwin was requested by vote to interview each of the city newspapers and urge the necessity for a hospital at Fayette.

The secretary informed the society that 1914 officers would be elected at the November meeting.

C. W. WATTS, M.D., Secretary.

HOWELL COUNTY MEDICAL SOCIETY

The Howell County Medical Society met in regular session at the K. P. Hall, August 7, at 2 o'clock p. m., Dr. Cunningham of Pomona in the chair. The minutes of the last meeting were read and approved.

Members present: Drs. J. B. Cunningham, Pomona; W. S. Eckles, Siloam Springs; H. A. Thompson, Lanton; James Black, South Fork; Shuttee, Weusthoff, Elliott, Johnson and Thornburgh, West Plains, and J. W. Bingham, Pottersville.

We had the pleasure of having with us Dr. J. E. Goodwin, Secretary State Association, and on motion of one of the essayists for this meeting the papers were carried over and the time was given to Dr. Goodwin to discuss any subject he thought of most importance to the society. He gave us a very interesting talk on the purpose and practical workings of the county society, and urged that more papers be sent to the state JOURNAL for publication. The country doctor, who is largely in the majority, wants practical ideas that will help him get results, rather than too much of a scientific nature that contains much that is untried theory. Folk who are sick want to get well, and they call the doctor who has something useful and of known merit to give rather than scientific theory of unknown value. The sick man wants to get well, and it is by the exchange of ideas that have proven their usefulness that the medical men make progress.

He also urged that the society use care in voting in new members so that the roll be kept clean. It is so much easier to keep out an undesirable man than to get him out once he is in. His talk was in the form of an impromptu advice, and was well received and much appreciated. His visits are always of great value to the county society.

Dr. T. J. White, Gainesville, was elected a member.

Dr. Elliott reported the organization of Wright and Douglas counties on Tuesday and Wednesday of this week, with the assistance of Dr. Goodwin. He reports the physicians of these counties as being harmonious and enthusiastic for society work.

The society gave a noonday luncheon to the members and their wives, in honor of the visit of Dr. and Mrs. Goodwin and Miss Osborne. This was a most pleasant occasion, being a general get-together meeting, where all might become acquainted. After luncheon the ladies were taken over the city for an automobile ride.

A. H. THORNBURGH, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

MEETINGS AND PROGRAMS

GENERAL SECTION

Sessions are held in the rooms of the Kansas City Medical Library on the thirteenth floor of the Rialto Building, Ninth Street and Grand Avenue, Tuesday evenings, at 8 p. m. Visitors welcome to professional programs. Both phones Main 1769.

Tuesday Night, Sept. 23, 1913.—1. "Report of Case of Diaphragmatic Hernia," H. P. Kuhn. 2. "The Diagnosis and Treatment of Some Aberrant Types of Lichen Planus," R. L. Sutton.

Tuesday Night, Sept. 30, 1913.—1. "Presentation of Clinical Cases," P. T. Bohan. 2. "A Report of Two Cases of Brain Tumor in the Posterior Fossa," A. L. Skoog.

Tuesday Night, Oct. 7, 1913.—No meeting on account of meeting of Medical Association of the Southwest.

Tuesday Night, Oct. 14, 1913.—"The Relations of Reactive Processes to Sarcomas," A. E. Hertzler.

Tuesday Night, Oct. 21, 1913.—"The Use of Tuberculin in the Treatment of Tuberculosis," W. W. Duke.

EYE, EAR, NOSE AND THROAT SECTION

Meeting to be held Oct. 9, 1913, in the Library Room, Rialto Building.

1. "Brief Report of the International Medical Congress," H. H. Look. 2. "Hay-Fever," W. T. Singleton, Jr. 3. "Elliot's Trephining Operation for Glaucoma," F. B. Tiffany.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society met in regular monthly session in the Court-house at Higginsville, September 9, Dr. M. A. Braecklein, president, in the chair.

Clinical cases were reported by Drs. Mackey, Braecklein and Ryland. They were discussed at length with much interest and benefit to those present.

Dr. Braecklein read a paper on "Serum and Vaccine Therapy." The doctor had given much thought and study to the subject and gave his conclusions derived from his observations from an extensive use of serum vaccines and bacterins. He was very enthusiastic regarding the therapeutic value, excepting rheumatism phylacogen, which results were negative. A spirited though profitable discussion followed.

Dr. Ryland, Lexington, gave the society the benefit of his findings in the use of typhoid vaccine, which were very favorable.

At the suggestion of Dr. Carthrae, Sr., the subject of ethics as regards calling of a second physician by the family without the knowledge or discharge of the physician previously called, was discussed. On motion of Dr. Johnston a committee of five was appointed to report on the subject at the next regular meeting.

At the suggestion of the members of the society at Higginsville the society put itself on record as disapproving an advertisement of a doctor as contained in a local paper.

The meeting was fairly well attended. The society can only be kept valuable by prompt and regular attendance at its meetings. Present at this meeting were Drs. Lewis Carthrae, Sr., Lewis Carthrae, Jr., Cope, Chalkley, Roberts, Ryland, Clayton, Dawson, Mackey, Braecklein, Ott, Johnston, Schneider and Schreiman. FERDINAND SCHREIMAN, M.D., Reporter.

PLATTE COUNTY MEDICAL SOCIETY

At the July meeting of the Platte County Medical Society the following resolutions were adopted:

WHEREAS, A bill has been introduced in Congress by Senator Owen calling for the establishment of a Department of Health for the purpose of conserving the health and lives of the people of this country, and

WHEREAS, We, the physicians of Platte County, believe this bill if passed would aid greatly in the prevention and control of disease, and

WHEREAS, Our representative, Mr. Chas. F. Booher, has refused to give his support to the passage of the Owen bill after he was informed of the declaration of the Missouri State Medical Association favoring the passage of this bill; therefore be it

Resolved, That the Platte County Medical Society declares its dissatisfaction with Mr. Booher's attitude toward the Owen bill and calls on him to give this bill his earnest and consistent support to the end that it may become enacted into law; and be it further

Resolved, That these resolutions be spread on the minutes and a copy sent to Mr. Booher, a copy to the Secretary of the Missouri State Medical Association and a copy to the county newspapers for publication.

MEETING OF SEPTEMBER 3

The meeting was called to order by the president, Dr. M. H. Moore. Present were Drs. M. H. Moore, J. B. Willis, Z. W. Shultz, A. S. Herndon, A. S. J. Smith, Spence Redman, E. R. Hull and L. C. Calvert.

Dr. A. S. Herndon of Camden Point read a paper on "Puerperal Sepsis." Although there are a scarcity of clinical cases nowadays of puerperal sepsis, owing to improved surgical technic, the doctor gave many valuable suggestions as to their management should they occur. In the discussion which followed all mem-

bers present took part. The many forms of treatment of this grave affection were given special attention. Dr. Redman spoke of inserting a catheter to the fundus of the uterus and packing gauze snugly in the uterus around the tube and repeated instillations through the tube to the interior of the uterus of a 25 per cent. alcoholic solution as an antiseptic. Many other efficient remedial measures were spoken of which served to refresh the memory.

Dr. G. D. Yokom of Parkville followed with a paper entitled, "Asepsis and Antisepsis of Parturition," which was enjoyed by all. An interesting discussion followed.

At the conclusion of the program Dr. John B. Willis tendered his resignation to the society and by vote the resignation was accepted. There being no further business the society adjourned to meet in Parkville, October 1. LEWIS C. CALVERT, M.D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its regular monthly meeting Sept. 10, 1913, President Rutledge in the chair.

The minutes of the last meeting were approved as read.

The application of Dr. C. Moore, St. Marys, was voted on and he was unanimously elected to membership.

No further business appearing the society adjourned until the second Wednesday in October.

R. W. LANNING, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, October 1, thirty-six members being present. The minutes of the previous meeting were read and approved.

There was no regular program so the society listened to the reports from the various doctors who attended the meeting of the Missouri Valley Medical Society at Omaha, which were very much enjoyed. The following members participated: Drs. Chas. Geiger, Floyd Spencer, T. M. Paul, A. L. Gray.

Dr. H. Lee emphasized the compulsion of physicians treating cases of membranous croup and diphtheria submitting cultures to a laboratory for the purpose of verifying the diagnosis. Dr. Stamey was present and informed the society that the Board of Health was at all times ready to furnish test-tubes of blood-serum free of charge for this purpose.

On motion of Dr. Ladd, seconded by Dr. McGill, Dr. Stamey was also instructed to make a statement before the Board of Health requesting that dogs which had bitten persons, be not killed immediately and that the police be instructed to cage these dogs for several days in order to confirm the diagnosis of hydrophobia.

At the suggestion of Dr. Hartigan the secretary was instructed to write Councilman Brendel regarding the poor telephone service and to complain at the discontinuance of the classified directory in the back of the book.

Dr. Chas. Greenberg and Dr. G. A. Ruetter were elected members.

The president appointed a committee consisting of Drs. Ladd, Gray and Owens to wait on Dr. J. P. Chesney and extend to him an honorary membership in our society.

On motion the society adjourned.

W. F. GOETZE, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in quarterly session at Marshfield, Mo., September 17. The meeting was called to order by the president, Dr. E. M. Bailey, at 1:30 p. m. Drs. Rabenau, Bailey, Beatie, McHaffie, Highfill and Bruce answered the roll call.

The secretary's report was read and approved, as was the report of the treasurer. The vote on the amendment to increase the dues of the society to \$2 carried. Voted to hold our next meeting at Rogersville, December 17.

Dr. M. Highfill reported a case of articular rheumatism which was of special interest by the fact that it was of such severe type, with pain, rapid pulse and breathing, and yet little or no fever.

J. R. BRUCE, M.D., Sec.-Treas.

THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which those abstracts are based may be obtained from the American Medical Association, 535 North Dearborn Street, Chicago, Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

WHOOPIING-COUGH VACCINE (BORDET-GENGOU BACILLUS).—This vaccine is prepared from the Bordet-Gengou bacillus derived from a case of whooping-cough. Sophian-Hall-Alexander Laboratories, Kansas City, Mo. (*Jour. A. M. A.*, Sept. 6, 1913, p. 771).

ELECTR-HG.—A colloidal suspension of mercury, equivalent to 0.1 per cent. metallic mercury rendered stable by sodium arabate. Electr-Hg is claimed to have an action similar to that of soluble salts of mercury. Injected intramuscularly, it is said not to produce pain or indurations. It is used intramuscularly, intravenously and also intraspinally. Electr-Hg is marketed in the form of Ampules of Electr-Hg, 5 Cc., in a non-isotonized condition. The package contains a physiologic salt solution with directions for the extemporaneous isotonicization of the preparation before the injection. Comar and Cie, Paris, France (*Jour. A. M. A.*, Sept. 13, 1913, p. 868).

MELUBRIN.—Melubrin is sodium 1-phenyl-2, 3-dimethyl-5-pyrazolon-4-amido-methan-sulphonate. It is closely related to antipyrin. Melubrin is white, almost tasteless and readily soluble in water. It is said to have almost no effect on the circulation or respiration in moderate doses, but to be a powerful antipyretic and analgesic. It is claimed to be useful in sciatica and other neuralgias and as an antipyretic in febrile affections. It is said to act similar to salicylates in acute rheumatism. Farbwerke-Hoechst Co., New York (*Jour. A. M. A.*, Sept. 13, 1913, p. 869).

ACNE BACILLUS VACCINE.—Each Cc. contains 50 million killed acne bacilli suspended in physiologic salt solution with 4-10 per cent. trikresol. Cutter Laboratory, Berkeley, Cal.

COLI VACCINE.—A suspension of the *Bacillus coli communis* in physiologic salt solution with 4-10 per cent. trikresol. Containing 50 million killed *Bacilli coli* per Ce. Cutter Laboratory, Berkeley, Cal.

PNEUMOCOCCIC VACCINE.—A suspension of mixed strains of the *Diplococcus pneumoniae* in physiologic salt solution with 4-10 per cent. trikresol. Containing 50 million killed pneumococci in each Ce. Cutter Laboratory, Berkeley, Cal.

STAPH-ACNE VACCINE.—A mixture of killed staphylococci and of killed acne bacilli in physiologic salt solution with 4-10 per cent. trikresol; each Ce. containing 500 million staphylococci and 50 million acne bacilli. Cutter Laboratory, Berkeley, Cal.

STAPHYLOCOCCIC VACCINE.—A suspension of the *Staphylococcus aureus*, *albus* and *citreus* in physiologic salt solution with 4-10 per cent. trikresol. A suspension of various strains of staphylococci containing about 500 million to each Ce. Cutter Laboratory, Berkeley, Cal.

PYOCYANEUS VACCINE.—A suspension of mixed strains of killed *Bacillus pyocyaneus*, in physiologic salt solution with 4-10 per cent. trikresol, 1 Ce. containing about 50 million killed bacilli. Cutter Laboratory, Berkeley, Cal.

STREPTOCOCCIC VACCINE.—A suspension containing in each Ce. 50 million of killed streptococci in physiologic salt solution with 4-10 per cent. trikresol. Cutter Laboratory, Berkeley, Cal.

TYPHOID VACCINE.—A suspension of killed bacilli in physiologic salt solution with 4-10 per cent. trikresol; containing 50 million killed typhoid bacilli of various strains in each Ce. Cutter Laboratory, Berkeley, Cal.

TYPHOID PROPHYLACTIC.—A suspension made from a single strain, viz., that employed by the United States Army. Each Ce. contains 1 billion killed typhoid bacilli. Cutter Laboratory, Berkeley, Cal. (*Jour. A. M. A.*, Sept. 13, 1913, p. 869).

ANTIGONOCOCCUS SERUM.—Marketed in 10 Ce. syringes. Lederle Antitoxin Laboratories, New York City.

ANTIMENINGOCOCCUS SERUM (ANTIMENGITIS SERUM).—Marketed in 15 Ce. cylinders. Lederle Antitoxin Laboratories, New York City.

ANTISTREPTOCOCCUS SERUM.—Marketed in 50 Ce. cylinders. Lederle Antitoxin Laboratories, New York City.

ANTISTREPTOCOCCUS SERUM, POLYVALENT.—Marketed in 10 Ce. syringes.

ANTIPNEUMOCOCCUS SERUM.—Marketed in 50 Ce. cylinders and in 10 Ce. syringes. Lederle Antitoxin Laboratories, New York City.

NORMAL HORSE SERUM.—Marketed in 10 Ce. syringes and 100 Ce. vials. Lederle Laboratories, New York City.

SCARLET FEVER TREATMENT.—Marketed in four strengths in syringe packages, two vial packages and 20 Ce. vials. Lederle Antitoxin Laboratories, New York City.

SCARLET FEVER PROPHYLACTIC.—Marketed in packages of three syringes and in packages of three vials. Lederle Antitoxin Laboratories, New York City (*Jour. A. M. A.*, Sept. 13, 1913, p. 869).

ANTI-TYPHOID VACCINE (IMMUNIZING).—This vaccine is prepared according to Russel from the strain used in the U. S. Army. It is marketed in three syringes and in ampules. National Vaccine and Antitoxin Institute, Washington, D. C., (*Jour. A. M. A.*, Sept. 13, 1913, p. 869).

REFORM IN MEDICINES

TETANUS ANTITOXIN.—A study of statistics leaves no room for doubt that tetanic antitoxin is well worth while as a curative agent in developed cases. In its use as a prophylactic agent, it must always be kept in mind that tetanus antitoxin does not remain long in the body. Vaillard states that the protective influence in man lasts but one to two weeks. In those cases in which the complete removal of the infectious bacilli cannot be assured, a repetition of the injection is necessary. Cases of tetanus developing some weeks after a prophylactic use of antitoxin are occasionally observed, and are undoubtedly due to the neglect of this precaution (*Jour. A. M. A.*, Aug. 30, 1913, p. 687).

DIABETIC FOODS.—From an exhaustive examination of diabetic foods, made in the Connecticut Agricultural Experiment Station, Street and Mendel conclude that the following conditions should apply to such a product: 1. It should contain much less carbohydrate than is found in a normal food of the same class—certainly not over half as much. 2. The label should bear a correct statement of the percentages of protein, fat and carbohydrates present. 3. The amount of the different carbohydrates present should be declared on the label, that is, starch, sucrose, levulose, lactose, etc. 4. The processes of manufacture should be so standardized that uniformity of composition, within reasonable limits, will be maintained from year to year. 5. No statement should be placed on the label which would give the impression that any food in unlimited quantity is suitable for a diabetic patient. 6. In the advertisements of these foods emphasis should be put on the carbohydrate content rather than on the amount of protein present (*Jour. A. M. A.*, Aug. 30, 1913, p. 687).

THE THERAPEUTIC RANGE OF SALVARSAN.—Experience has shown that a complete cure of syphilis cannot be secured uniformly by one or two injections of Salvarsan or Neosalvarsan. But Salvarsan does effect what must be termed a *therapia magna sterilisans* in certain human diseases. This is true of recurrent fever which is caused by a variety of spirochete, frambesia or jaws, a tropical disease resembling syphilis and caused by a spirochete. Numerous infectious diseases of different nature are said to be favorably influenced by its use (scarlet fever, small-pox, glanders, etc.). Vincent's angina and other lesions due to oral spirochetes appear to yield rapidly to Salvarsan. Aleppo boil and other diseases caused by the organisms of the Leishmania group are also said to yield to Salvarsan (*Jour. A. M. A.*, Aug. 30, 1913, p. 686).

EMETIC ACTION OF DIGITALIS.—Cary Eggleston concludes that there is no valid experimental or clinical evidence that therapeutic doses of digitalis cause nausea or vomiting through local irritant action of the alimentary tract, but that there is much evidence that the vomiting is not caused by such local action. He states that there is experimental evidence that the nausea and vomiting resulting from therapeutic quantities of digitalis principles are due solely to their action on the vomiting center and therefore result only after the employment of a sufficient amount of drug. Eggleston concludes that it is fallacious and irrational to attempt to avoid these symptoms resulting from the oral administration of any given digitalis preparation by resorting to another preparation or to another channel of administration (*Jour. A. M. A.*, Sept. 6, 1913, p. 757).

DRUGS SOLD TO DISPENSING PHYSICIANS.—An investigation of drugs sold by "physicians' supply houses" has been made in the A. M. A. Chemical Laboratory. The products examined were morphin tablets, potassium iodid tablets, fluidextract of goldenseal, Fowler's

solution, zinc ointment and fluidextract of digitalis. The report concludes that although the examinations do not cover a wide field, they are sufficient to show that the random charge of sophistication and adulteration which has been repeatedly made against "physicians' supply houses" is unjustified. On the other hand, the examination shows that the products put out by this class of firms, without being sold at a materially lower price, are less reliable than those of the pharmaceutical houses. The report then closes with a discussion of the "specialties" put out by this class of firms: "When one compares this class of preparations as put out by the two classes of firms one is struck with the fact that the specialties of the 'physicians' supply houses' are a little more unscientific, a little more devised to mislead or cheat the user, are a little more brazen in their imitation of fraudulent and worthless proprietaries and more deliberately aimed to satisfy the unthinking physicians than are those of the 'regular' pharmaceutical manufacturers" (*Jour. A. M. A.*, Sept. 13, 1913, p. 855).

PROPRIETARIES IN GREAT BRITAIN.—The National Insurance Act under which many now receive practically free medical service provides that, under certain conditions, the physicians who work under the act, may receive some of the funds set aside for the purpose. This has tended to make unpopular the prescribing of expensive proprietaries rather than the cheaper official preparations. Those medical journals which derive a large portion of their advertising income from proprietary medicine advertisements are not feeling happy. These publishers are between the devil and the deep, blue sea. If they come out openly in favor of prescribing high-priced proprietaries in place of the lower-priced official drugs, they are asking their subscribers to do something which is not only unscientific but also contrary to the financial interest of the physicians working under the act (*Jour. A. M. A.*, Sept. 13, 1913, p. 872).

THE FRIEDMANN INSTITUTES.—The Friedmann cure for tuberculosis is utterly discredited. All reliable reports regarding the treatment of patients by Friedmann's method seem to show either that it is actually injurious or else that it is less efficient than other well-known and less dangerous means of treatment. The scheme of floating Friedmann institutes in different states successfully evades any reprisal on the part of the federal government. It therefore devolves on the various states to take such action as is necessary to prevent the heartless exploitation of the unfortunate consumptives within their borders (*Jour. A. M. A.*, Sept. 13, 1913, p. 874).

DISEASE SUPERSTITIONS.—The belief is common among primitive and unlettered people that there is a specific remedy for every disease—an herb for every ill. The people must be taught that disease is not an accident or a dispensation of Providence or the infliction of an evil spirit, but the result of environment and the result of the mode of living. They must learn that health does not return by magic or by magic compounds; but must be restored by a personal battle against disease (*Jour. A. M. A.*, Sept. 13, 1913, p. 884).

DIPHTHERIA ANTITOXIN AS AN IMMUNIZING AGENT.—Diphtheria antitoxin is quite generally used as an immunizing agent. Usually a dose of 500 units is given to all the children in a family in which a case of diphtheria has developed. In such instances no attention is paid to the possibility of anaphylaxis on later injection of diphtheria antitoxin. Indiscriminate immunization by the injection of serum is not advised by any writers on this subject. To avoid serious results from anaphylaxis in cases in which known immunizing

doses have previously been given, it is customary to inject first a small dose of from 5 to 8 minims, and if no symptoms develop, to follow this within an hour with the full dose which it is desired to inject. (*Jour. A. M. A.*, Sept. 13, 1913, p. 885).

CLINICAL INVESTIGATIONS.—From the title of the Council on Pharmacy and Chemistry the erroneous inference is often drawn that it deals with laboratory matters exclusively and that questions of therapeutics receive no consideration. While chemical or pharmacologic tests are sufficient to disprove many claims for proprietaries, clinical investigations are made when needed, either by the clinicians of the Council or by the Council's Staff of Clinical Consultants. The final decision that natural salicylates are not superior to the synthetic kinds was reached by means of clinical trials carried out under the direction of the Council's Committee on Therapeutic Research. This illustrates the broad scope of the Council's work (*Jour. A. M. A.*, Sept. 20, 1913, p. 968).

NATURAL AND SYNTHETIC SALICYLATES.—The investigations carried out under the auspices of the Council's Committee of Therapeutic Research have shown: 1. Contrary to certain statements in the older literature, there is no difference in the toxic dose for animals between "natural" sodium salicylate, the most highly purified synthetic, and the cheapest commercial sodium salicylate now found on the market. 2. The evidence for the claimed clinical differences, as found in medical literature, is extremely unsatisfactory and inconclusive. 3. No significant chemical impurities are present in commercial synthetic salicylate. 4. No difference can be detected clinically, either in the therapeutic or toxic effects, if the comparison is made under conditions which strictly exclude personal bias. The Council therefore concludes that there is no difference in the actions of "natural" and synthetic salicylates, and that statements that differences exist are unfounded (*Jour. A. M. A.*, Sept. 20, 1913, p. 979).

THE GOVERNMENT AND RADIUM.—The United States government should investigate the usefulness of radium and radio-active water because the government is exploiting, in an entirely unjustified manner, the radio-activity of the waters of Hot Springs, Arkansas. While the Interior Department appears to be in possession of the information, this has not been made public (*Jour. A. M. A.*, Sept. 20, 1913, p. 969).

CALOX.—The name "Calox" and the past claims of the exploiters, McKesson & Robbins, have led to the belief that this tooth powder contained calcium peroxide. An examination made in the A. M. A. Chemical Laboratory demonstrated that no calcium peroxide is now present and that it contains a soluble compound, probably sodium perborate, instead (*Jour. A. M. A.*, Sept. 30, 1913, p. 978).

NON-VIRULENT T. B. VACCINE.—Regarding the Non-Virulent Tubercle Bacillus Vaccine put out by G. H. Sherman we have nothing but the word of the promoter regarding what it is or what it is good for. One is led to believe by the advertising matter, without specifically being told, that this vaccine is the same as, or a modification of, the notorious Friedmann preparation. According to the promoter the organism proposed as a remedy has been rendered non-virulent by killing it and converting it into a vaccine. There is no reason to expect more of this preparation—agreeing that it is what its promoters think it is—than of the tuberculins already well known. It is to be hoped that physicians will bear in mind the fiascos of prematurely announced discoveries and give this Friedmann shadow a wide berth (*Jour. A. M. A.*, Sept. 20, 1913, p. 979).

BOOK REVIEWS

CHLORIDE OF LIME IN SANITATION. By Albert H. Hooker, Technical Director, Hooker, Electrochemical Company; 244 pages; cloth, \$3. John Wiley & Sons, New York. Chapman & Hall Limited, London, 1913.

This book is a practical working manual for those who use chloride of lime or calcium hypochlorite for purposes of disinfection. The manufacture, chemical analysis and general properties of the commercial product are thoroughly described. The use of lime as a disinfectant of water, sewage, for street sprinkling, swimming pools, in epidemics, surgery and general sanitation, is described historically and with careful attention to the technical detail. The chapter on abstracts and references touch on nearly every subject where sanitation is necessary to the health of the community. This portion of the book is a most valuable contribution to this subject. The work has been done with care and excellent judgment.

The book is highly recommended for its valuable suggestions on nearly all of the important subjects of medical sanitation.

A REFERENCE HANDBOOK OF GYNECOLOGY FOR NURSES. By Catharine Macfarlane, M.D., Gynecologist to The Woman's Hospital of Philadelphia. Second Edition, thoroughly revised. 32mo of 156 pages, with original line drawings. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, \$1.25 net.

A convenient and concise handbook containing a fund of useful information for nurses.

DIET LISTS OF THE PRESBYTERIAN HOSPITAL, NEW YORK CITY. Compiled with notes by Herbert S. Carter, M.D., Assistant Visiting Physician to the Presbyterian Hospital, Associate in Medicine at Columbia University, etc. 12mo of 129 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$1.00 net.

The diet lists are intelligently arranged and succinctly described. A useful manual for the dietitian.

HYGIENE AND SANITATION. A Text-Book for Nurses. By George M. Price, M.D., Director, Joint Board of Sanitary Control; Director of Investigation, New York State Factory Commission. 12mo., 236 pages. Cloth, \$.150, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

This book is especially well adapted for the purpose its author had in mind. The layman, however, as well as the professional nurse will be benefited by its perusal. Would that all books of this kind were as intelligible as the volume before us.

PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, M.D., Chas. L. Mix, A.M., M.D. Volume I. General Medicine. Edited by Frank Billings, M.D., and J. H. Salisbury, A.M., M.D. Pp. 377. This Volume \$1.50; Series of 10 Volumes, \$10. Year Book Publishers, Chicago.

This volume includes infectious diseases; diseases of the circulatory organs; blood-vessels, blood and blood-making organs; diseases of the ductless glands; metabolism and diseases of the kidneys, urine.

PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Volume II. General Surgery. Edited by John B. Murphy, M.D., A.M., LL.D. Pp. 632. This Volume \$2. Year Book Publishers, Chicago, 1913.

A review of general surgical subjects extending over a wide range of subjects.

PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Volume III. Eye, Ear, Nose and Throat. Edited by C. A. Wood, C.M., M.D., D.C.L. A. H. Andrews, M.D., and Gustavus P. Head, M.D. This Volume \$1.50. Year Book Publishers, Chicago, 1913.

PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Volume IV. Gynecology. Edited by E. C. Dudley, A.M., M.D., and H. M. Stowe, A.D. Pp. 218. Part 1, General Principles; Part 2, Infections and Allied Disorders; Part 3, Malformations and Tumors; Part 4, Traumatism; Part 5, Displacements. This Volume \$1.35. Year Book Publishers, Chicago, 1913.

PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, M.D., and Chas. L. Mix, A.M., M.D. Volume V. Pediatrics. Edited by I. A. Abt, M.D. Orthopedic Surgery, Edited by John Ridlon, A.M., M.D., with collaborations by Chas. A. Parker, M.D. Pp. 230. \$1.35. Year Book Publishers, Chicago, 1913.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Assisted by Leighton F. Appleman, M.D. Sept. 1, 1913. Lea & Febiger, Philadelphia and New York. \$6 Per Annum. Pp. 310.

This volume of Progressive Medicine is devoted to diseases of the thorax and its viscera, including the heart, lungs and blood-vessels; dermatology and syphilis; obstetrics and diseases of the nervous system.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. August, 1913. Volume II, Number 4. W. B. Saunders Company, Philadelphia and Chicago.

There are in this number twenty-three reports covering a wide range of surgical subjects, including a thoroughly interesting contribution on vaccine and serum therapy, and a series of skiagrams, showing the blood-supply in and around the joints.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. Vol. XV, No. 1. March, 1913. Lea & Febiger, Philadelphia.

This volume is devoted to a description of the advances in six important divisions of practice, namely: Surgery of the Head, Neck and Thorax, by Dr. Charles H. Frazier; Infectious Diseases, including Rheumatism, Croupous Pneumonia and Influenza, by Dr. John Rurah; Diseases of Children, by Dr. Floyd M. Crandall; Rhinology and Laryngology, by Dr. George B. Wood; Otology, by Dr. Arthur B. Duehl. An index completes the volume, which contains 355 pages.

PROGRESSIVE MEDICINE. Volume XV, No. 2. June, 1913.

In this issue we find attractive articles on topics that daily confront the practitioner. The list includes the following: Hernia, by Dr. William B. Coley; Surgery of the Abdomen, Exclusive of Hernia, by Dr. J. C. A. Gerston; Gynecology, by Dr. John G. Clark; Diseases of the Blood, including diseases of the thyroid, by Dr. Alfred Stengel; Ophthalmology, by Dr. Edward Jackson. Many illustrations add lucidity to the text.

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ORIGINAL ARTICLES

ANXIETY NEUROSIS AND ITS TREATMENT *

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It has long been recognized by all students of the subject that anxiety plays an important part in all of the neuroses but it was not isolated into a separate entity until in 1895, when Freud discussed the subject under the title, "On the Right to Separate from Neurasthenia a Definite Symptom-Complex as Anxiety Neurosis."

The disease is not always clearly defined and in some cases the diagnosis is not easily made. Freud describes the general symptomatic picture in the following manner: "General irritability, a cardinal symptom, which is manifested in the abnormal reaction toward stimuli which may originate internally or externally. This peculiar irritability may be expressed in various sense organs, especially in the auditory sphere—auditory hyperesthesia, which is a common cause for insomnia. The anxious anticipation in the sense of the impending danger, or the expectation of some unpleasant occurrence is another important symptom. Trifling and harmless happenings are anxiously exaggerated by the patient; a noise in the house suggests murder; pain in some part of the body means a grave disease, etc." Lowenfeld gives the following classification of anxiety tendencies: "(a) Anxiety relating to his own health — hypochondriacal anxiety; (b) moral anxiety, religious scruples, conduct, etc.; (c) abnormal anxiety about the health of the nearest relative; (d) morbid anxiety about his own ability or professional capacity."

The most characteristic symptom of anxiety neurosis is the attack of morbid anxiety, the development of which may be sudden or gradual.

* Read in the Medical Section of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting, held at St. Louis, May 13, 14, 15, 1913.

In discussing the pathology of morbid anxiety, Ernest Jones gives the following four reasons why, he considers a study of anxious nervous states as being of immense importance: "1. Including its indirect manifestations, morbid anxiety is the most frequent single symptom in psychopathology, and, I feel tempted to add, perhaps in all medicine; it has been called and without gross exaggeration the Alpha and Omega of practical psychiatry. 2. The intensity of distress it may give rise to is equaled by that of very few other forms of suffering. 3. The study of the pathogenesis of it is qualified as perhaps no other to lead us toward a comprehension of those deeper biologic problems concerning the relation of the body to mind that underlie the questions of the derivation of mental disturbances in general. 4. It is a disorder that in a great many cases obstinately resists treatment, unless this is based on a proper understanding of the pathology of it."

All anxiety is not morbid anxiety. Morbid anxiety continues over a considerable period of time and dominates to a varying degree the personality of the individual. Sidis says: "Anxiety is nothing less than the working instinct of fear, and fear is one of the most primitive and dominating instincts of life. It arises from the impulse of self-preservation, without which animal life cannot exist. No other instinct can compare with the fear instinct, rooted as it is in self-preservation." As Kipling expresses it: "Fear walks up and down the jungle by day and by night." Sidis says: "Fear appears early in the life of the child." Darwin says: "Fear is the most depressing of all the emotions, and if we expect to suffer we are anxious." James regards anxiety as morbid fear. "The anxious condition of mind," says Baine, "is a sort of diffused terror." Sidis further says: "Fear often expresses itself through the cardiac and circulatory affections, giving rise to feelings of anxiety." "The fear instinct is at the basis of all psychopathic diseases." Mosso says: "Anxiety, fear, horror, will twine themselves perpetually

around the memory like deadly ivy, choking the light of reason." Again, Sidis says that the teleology of fear is quite clear. "Fear is the guardian instinct of life." "The intensity of the struggle for existence, and the preservation of the life of the animal is expressed in the instinct of fear." "The fear instinct and its offspring, anxiety, weakens and dissociates and paralyzes the functions of the body and mind." "The patient's life is overshadowed by a gloom of anxiety which hangs on his mental horizon and the pangs of anxiety torment him like a dull toothache."

Oppenheim says: "Fear is a common symptom in neuroses. It may be an indefinite feeling of anxiety not awakened by any particular cause, or it may be definite concepts and external influences which call the fear into action." The sensation is variously described. It has its seat, as a rule, in the cardiac region, at other times in the head. "The patient feels as if his heart were standing still." "He thinks that he must fall or that he will get a stroke. Some explain the condition thus—it seems to me that I have done something wrong, as if something terrible is going to happen."

The expression of the face reveals a condition of anxiety, the fear often producing vasomotor, secretory and motor disturbances; the face reddens or becomes pallid, perspiration breaks out, the saliva ceases to flow, the lips and tongue become dry, the pulse and respiration become accelerated. These references, correlated with my own experience, justify me in assuming that the relations of fear and anxiety to the psychoses and neuroses are most important. Freud divides the neuroses into psycho and actual neuroses. The psychoneuroses comprise hysteria and compulsion neuroses, while the actual neuroses include neurasthenia and anxiety neurosis. He designates the typical symptoms of neurasthenia as headache or pressure on the head, spinal irritation and dyspepsia with flatulence and constipation. It is by these symptoms he differentiates the real neurasthenia from pseudoneurasthenias. As stated above the most common symptoms of anxiety neurosis are general irritability and anxious expectations. Freud mentions the following as being a list of those forms of attacks of anxiety which occur in these conditions: "(a) With disturbances of heart action such as palpitation with transitory arrhythmia, with longer continued tachycardia up to grave states of heart weakness, the differentiation of which from organic heart affections is not always easy; among such we have the pseudo-angina pectoris: (b) with disturbances of respiration, many forms of nervous dyspnea, asthma-like attacks, etc. (I assert that even these attacks are not always accompanied by conscious anxiety); (c) of profuse perspiration, often nocturnal; (d) of trembling and shaking which may readily be mistaken for

hysterical attacks; (e) of inordinate appetite, often combined with dizziness; (f) of attack-like-appearing diarrhea; (g) of locomotor dizziness; (h) of so-called congestions, embracing all that was called vasomotor neurasthenia, and (i) of paresthesias—these are seldom without anxiety, or a similar discomfort."

We can all easily recall specific instances in which one or more of these attacks were manifested by neurotic patients. Relative to the etiology of anxiety neurosis Freud says that in many cases no etiology can be readily ascertained, but that in such cases it is not difficult to demonstrate a marked hereditary taint. He further states that where we have reason to assume that the neurosis is acquired we can usually find by careful and laborious examination that the etiologic moments are based on a series of injuries and influences of the sexual life. There has been so much written and said that was erroneous, and so much misunderstanding concerning the sexual etiology of the neuroses and the psychoneuroses, that I believe a brief discussion of this subject at this time would be proper. Many physicians believe that when the term sexuality is used, sexual lust alone is meant; and this perhaps was the case at first, but Jung, Freud and their followers use the term now in a much broader sense. The dominating instincts of man and animal are the instincts of self-preservation, and of the preservation of the species. The term libido is commonly considered to mean venereal desire, but the meaning given to it by Jung and Freud is venereal desire plus those other things which are most intimately concerned in the preservation of self and in species preservation. In the libido is found the life forces and vitalizing energies. The libido is present even in infants and young children, and may be manifested in them by perversities. During the process of growth if the libido be directed into normal channels there is a normal development; otherwise, at some point in the development of the individual, the misdirected libido will manifest itself by a neurosis or psychosis. Proper development occurs if the libido is harmoniously and properly distributed throughout the organism.

In the sexual development of the individual there are three phases: first, the presexual stage; second, prepuberty stage, and third, the stage of maturity. It is most difficult to limit the presexual stage. Jung places it as previous to the third to fifth years. In this stage the development of the individual is chiefly concerned in the nutrition of self, and the libido is directed along channels leading to this end. After the child passes through the presexual stage, entering the prepuberty stage there is present a certain amount of libido of a sexual character, usually of a homosexual type. After this stage is passed and the child passes into the stage of maturity

more of the libido is directed into sexual channels, homosexuality is transformed into heterosexuality and the libido becomes more intense. The person who develops a neurosis or a psychosis is unable to adapt himself properly and in a harmonious manner to the realities of life. The libido in such cases is always misdirected and improperly distributed, and he attempts to compensate for his inability to adjust himself by substituting phantasies for the realities. In such cases the infantile type of mental disposition is characteristically present. There is a disinclination to face the realities, sexual perversities may be manifested, and in some cases there is a transformation of the heterosexuality into homosexuality. Freud says: "For the more precise description of the etiologic determinants under which anxiety neurosis occurs, it will be advisable to treat separately those occurring in men and those occurring in women."

Anxiety neurosis in women — disregarding their predisposition—occurs in the following cases: 1. As virginal fear or anxiety in adults. A number of unequivocal observations showed me that that an anxiety neurosis, which is most typically combined with hysteria, can be evoked in maturing girls at their first encounter with the sexual problem, that is, at the sudden revelation of the things hitherto veiled, by either seeing the sexual act, or by hearing or reading something of that nature. 2. As fear in the newly married. Young women who remain anesthetic during the first cohabitation not seldom merge into anxiety neurosis, which disappears after the anesthesia is displaced by the normal sensation. 3. As fear in women whose husbands suffer from *ejaculatio praecox* or from diminished potency, and (4) in those whose husbands practice *coitus interruptus* or *reservatus*. On the other hand the woman is spared from the neurosis if the husband afflicted by *ejaculatio praecox* can repeat the congress with better results immediately thereafter. *Coitus interruptus* is almost regularly injurious, but for the woman it is injurious only if the husband practices it regardlessly, that is, if he interrupts *coitus* as soon as he comes near *ejaculating* without concerning himself about the determination of the excitement in his wife. 5. As fear in widows and intentional abstainers, not seldom in typical combination with obsessions; and (6) as fear in the climacterium during the last marked enhancement of the sexual desire. The cases (3), (4) and (5) contain determinants under which the anxiety neurosis originates in the female, most frequently and most independently of hereditary predisposition.

I will now mention the sexual determinants of anxiety neurosis in men. I would like to formulate the following groups, every one of which finds its analogy in women:

1. Fear of the intentional abstainers; this is frequently combined with symptoms of defense (obsessions, hysteria).

2. Fear in men with frustrated excitement (during the engagement period), persons who, out of fear for the consequences of sexual relations, satisfy themselves with handling or looking at the woman.

3. Fear in men who practice *coitus interruptus*. As observed above, *coitus interruptus* injure the woman if it is practiced regardless of woman's gratifications; it becomes injurious to the man if, in order to bring about the gratification in the woman, he voluntarily controls the *coitus* by delaying the ejaculation.

4. Fear in men in the senium. There are men who show a climacterium, like women, and merge into an anxiety neurosis at the time when their potency diminishes and their libido increases. Finally I must add two more cases holding true for both sexes.

5. Neurasthenics merge into anxiety neurosis in consequence of masturbation as soon as they refrain from this manner of sexual gratification. These persons have made themselves especially unfit to bear abstinence. What is most important for the understanding of the anxiety neurosis is the fact that any noteworthy development of the same occurs only in men who remain potent and in non-anesthetic women.

6. The last of the etiologic determinants to be mentioned seems, in the first place, really not to be of a sexual nature. Anxiety neurosis originates in both sexes through the moment of overwork, exhaustive exertion, as, for instance, after sleepless nights, nursing the sick, and even after serious illness.

In addition to a consideration of the above-mentioned etiologic factors it is worthy of note that oftentimes an anxiety neurosis may suddenly develop following a mental shock, an acute grief, an exciting experience, business worries or excessive mental labor. These mental disturbances may be very mild in type and of such a character that it is incomprehensible to the observer how they could have caused the subsequent neurosis. Freud states, and has proven in innumerable instances, that these etiologic moments are really the manifest cause or causes of the neurosis, but that the latent and predisposing cause has been some specific sexual injury. In order to uncover and demonstrate the latent or sexual cause it is necessary to analyze the subconscious. The purest cases of anxiety neurosis, says Freud, are found in the young potent individual, with uniform etiology and where the disease is not of long standing. "To be sure," he says, "the symptoms of anxiety are found most frequently as a simultaneous and common occurrence with those of neurasthenia, hysteria, compulsive ideas and melancholia.

"In its intrinsic property, anxiety neurosis shows the most interesting agreements and differences when compared with the other great neuroses, particularly when compared with neurasthenia and hysteria. With neurasthenia it shares one main character, namely, that the source of excitement, the cause of the disturbance, lies in the somatic rather than in the psychic sphere, as in the case of hysteria and compulsion neurosis. For the rest we can recognize a kind of contrast between the symptoms of neurasthenia and anxiety neurosis, which can be expressed in the catch words, accumulation and impoverishment of excitement. This contrast does not hinder the two neuroses from combining with each other, but shows itself in the fact that the most extreme forms in both cases are also the purest.

"When compared with hysteria, anxiety neurosis shows in the first place a number of agreements in the symptomatology, the valuation of which is still unsettled. The appearance of the manifestations as persistent symptoms or attacks, the aura-like-grouped paresthesias, the hyperesthesias and pressure points can be found in certain substitutes for the anxiety attack, as in dyspnea and palpitation, the aggravation of the perhaps organically determined pains (by conversion)—these and other joint features lead to the supposition that some things which are ascribed to hysteria can with full authority be fastened to anxiety neurosis. But if we enter into the mechanism of both neuroses, as far as it can at present be penetrated, we find aspects which make it appear that the anxiety neurosis is really the somatic counterpart to hysteria. Here as there we have accumulation of excitement, on which is perhaps based the similarity of the aforementioned symptoms; here as there we have a psychic insufficiency which results from abnormal somatic processes; and here as there we have instead of a psychic elaboration a deviation of the excitement into the somatic. The difference only lies in the fact that the excitement, in which displacement the neurosis manifests itself, is purely somatic (somatic sexual excitement) in anxiety neurosis, while in hysteria it is psychic (evoked through a conflict). Hence it is not surprising that hysteria and anxiety neurosis lawfully combine with each other, as in the 'virginal fear' or in the 'sexual hysteria,' and that hysteria simply borrows a number of symptoms from anxiety neurosis, etc. This intimate relationship between anxiety neurosis and hysteria furnishes us with a new argument for demanding the separation of anxiety neurosis from hysteria, for if this be denied, one will also be unable to maintain the so-painstakingly acquired distinction between neurasthenia and hysteria, so indispensable for the theory of the neuroses."

In the treatment of anxiety neurosis it is most necessary that we first ascertain the etiology. In order to do this it is usually necessary to analyze the subconscious, and we should not forget that the manifest cause may be of minor importance and that operating beneath the manifest cause is a latent cause which has predisposed the individual to react as he has when the manifest cause became operative. We may be able in some cases to demonstrate the latent cause by direct interrogation while writing the anamnesis. In other cases we are successful by the method of free association, namely, having the patient close his eyes, in a quiet room, and relate in their order all the thoughts which pass through his mind. It may be necessary to employ the association method as originated by Bleuler, Jung and Riecklin. For this we ordinarily use 100 words for analytic and diagnostic purposes. These words are called test words and were selected and arranged in a manner to strike almost all of the common complexes. The examiner gives the test words and the person being examined responds as quickly as possible, with the first word coming into his mind which has been suggested by the test word, the examiner measuring the time between the naming of the test word and the response on the part of the patient. After the list of 100 words has been gone through the stimulus words are repeated and the patient is asked to reproduce his original response words. The average time of response is two and four-tenths seconds. If the reaction time is prolonged, or we have a lack of or faulty reaction, a repetition of the stimulus words or a failure of reproduction, we have a complex indicator. This would indicate that the stimulus word to which the reaction has been faulty has touched a complexity of ideas of marked emotional accentuation, which is split off from the conscious and repressed into the subconscious. By following up these leads we can bring into consciousness this complex which has been etiologically potent in the production of the neurosis, or by dream analysis some cases can be analyzed. Dreams are wish-fulfilling and symbolical and have a manifest and latent content. It is in the latent content we find the key to the submerged complex. It is the tendency of the mind to suppress into the subconscious painful complexes, but these painful complexes are as potent for evil in the subconscious as would be an instrument of the operating surgeon when carefully concealed in a closed abdominal wound. The instrument can not be seen by the patient, and the patient may have no knowledge of its presence, but its evil effects continue to be manifest until the wound is opened and the irritating body removed. It would follow then that the most effective treatment of the anxiety neuroses would be a full exposition of the painful mental complexes which have caused a disharmonious

distribution and diversion of the libido into abnormal channels, together with a correction of habits, chiefly of a sexual character, which have caused the specific sexual injuries, which I believe almost invariably form the cornerstones of the foundation of the neurosis edifice.

CONCLUSIONS

1. Anxiety neurosis is an established clinical entity.

2. The central and dominating symptom is the anxiety.

3. Anxiety is the true and legitimate child of fear.

4. This fear is a fear of an inability for proper and harmonious reaction. The fear of an inability to react originates primarily from specific sexual injuries.

5. The manifest cause may be some minor shock, or overtax of the nerve energy, while the latent cause, which has acted as a predisposition and is the most important, is still sexual.

6. If sexual injuries cannot be demonstrated then hereditary predisposition is potent.

7. In order to find and grasp the latent cause an analysis of the subconscious is necessary.

8. If properly treated these cases should recover. The treatment consists in an analysis and explanation of painful complexes, and a correction of habits which have been responsible for their production.

3001 The Paseo.

CHEMICAL FACTORS AS A CAUSE OF STERILITY IN THE FEMALE*

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The part assigned to me in this symposium requires but a very brief discussion, for our knowledge of the chemical factors which may favor or inhibit conception has, for the most, hardly passed the stage of conjecture.

The chemical composition of the sperma must first be considered. The sperma is derived not only from the testicles but contains also secretions from the seminal vesicles, the vas deferens, the prostate and the glands of Cowper and Littre. If taken directly from the testicles, the sperma has a neutral reaction which changes to alkaline on the way through the genital tract, due to the admixture of the secretions of the seminal vesicles and the glands of the vas deferens. The prostatic secretion, on the other hand, has an acid reaction, which obviously is not intense enough to alter the alkaline reaction of the semen, but suffices to exert a specific influence on the spermatozoa.

The latter leave the testicles without any mobility of their own and do not become vitalized until they come into contact with the prostatic juice.

The mobility of the spermatozoa is paralyzed by the action of distilled water, but if certain substances are added to the water, the spermatozoa are revived. Rohleder, whose book, "*Die Zeugung beim Menschen*" (Leipzig, 1911), I have freely consulted for this article, mentions among these beneficial substances, egg albumin, sugar, glycerin, sodium chlorid, sodium phosphate, blood-serum and lymph fluid. As a general proposition alkaline salts increase mobility, while most acids, as well as mucus, ether, alcohol, chloroform, benzoin, mercury and its salts, exert an antagonistic effect.

The knowledge of these facts may be of some practical assistance to us as we approach the many mysteries of fecundation.

The spermatozoa after having been deposited in the vagina, come into contact with two different kinds of secretion, that of the vagina itself, and that from the cervix. The vaginal secretion is acid in reaction and destroys the mobility of the spermatozoa. This explains to a certain extent why Nature provides an enormous number of spermatozoa—225 millions on an average—in each ejaculation, although but a single one is actually destined to reach the ovum. We must assume that by such an overproduction of spermatozoa the many obstacles which are present even under normal conditions may be overcome and the ultimate object of sexual intercourse accomplished. The sperma is a concentrated fluid, while the vaginal secretion—at least in normal individuals—is present only in small quantities, and although millions of spermatozoa may be destroyed or paralyzed, there are still other millions which are not affected, and once they reach the cervix they find there an alkaline secretion which serves as an excellent culture medium and intensifies their mobility.

The secretion of the cervical glands forms the well-known mucous plug of Kristeller, within which the spermatozoa wander upward into the cervical canal and thence into the uterine cavity. Limiting myself to the chemical aspect of conception, I leave out of consideration all mechanical factors such as the suction of the cervix and the rôle played by the cilia of the cylindrical epithelium.

The secretion of the uterine glands also is alkaline, and, therefore, favorable to the persistence of the spermatozoa. This has been proved conclusively by a number of observations. Thus, Birch-Hirschfeld found in a prostitute suffocated during intercourse living spermatozoa in the uterine cavity sixteen hours after the death of the woman. In bats, conception is observed after the semen has been kept in the uterine cavity of the female during the entire winter.

* Read in a symposium on "Sterility in the Female," before the St. Louis Medical Society, April 26, 1913.

An understanding of these physiologic conditions is an indispensable premise in an attempt to explain a certain number of cases of sterility on the basis of disturbed chemical reactions in the absence of other tangible causes.

The inhibition due to the normal acid vaginal secretion must needs be intensified if the acidity of this secretion is increased. This may be caused by the action of bacteria or the influence of urine. That vesicovaginal fistulae almost always lead to sterility is well known. This is not only due to a mechanical washing out of the spermatozoa by the urinary stream, but even more so to the destructive action of the acidity of the urine. Rectal fistulae need not exert the same effect. I have observed several cases of complete and very extensive tear of the perineum followed by repeated pregnancies.

Diabetes is supposed to cause sterility by atrophy of the uterus, but I have known at least two cases where the genital organs were not atrophic and where the failure of conception could be ascribed to the accumulation of acid urine in the lower part of the vagina.

Strangely enough, pathologic secretions with alkaline reaction are as harmful to spermatozoa as the acid vaginal discharge. There seems to be an optimum of alkalinity beyond which the spermatozoa are either killed or weakened. Alkaline urine of cystitis and a host of purulent inflammations, chiefly gonorrhea, must be mentioned in this connection. Alterations in the chemical composition of the cervical secretion may have the same deleterious effect on the spermatozoa. The old teaching of Marion Sims as to the importance of the so-called pin-hole os uteri as a mechanical hindrance to conception is no longer universally accepted. It is difficult to understand why spermatozoa should not be able to enter when the menstrual blood was able to leave the cervical canal.

But it is undoubtedly true that the thick cervical mucus is detained behind such a narrow orifice and this cervical secretion changes its alkaline reaction in such a way as to interfere with the mobility and motility of the spermatozoa. The numerous successes of Sims, and indeed of all of us, with splitting open a contracted orifice of the cervix are plausible only when assuming that by instituting free drainage of the cervical secretion its alkalinity was restored to the normal condition.

On the other hand, a torn cervix may, in certain cases, interfere with conception either by the presence of a hyperalkaline or purulent discharge from the irritated cervical glands, or, on the contrary, by a transformation of the cylindrical into squamous cell epithelium with a resulting change to acid reaction.

I am keenly conscious of the difficulty of my task whenever I am called on to determine the cause of sterility in a given case. Only in a

small minority of instances is the etiology so clear as not to admit of any doubt. In a vastly greater number of cases the problem leads us to speculative theories or is wholly shrouded in mystery. This is the host of cases without any local or general pathology. There are so many factors that remain unknown to us. How often does a husband who has a guilty conscience evade our investigations as to the rôle he may play in this question! The entire field is beset with diagnostic pitfalls, and a hasty conclusion only too frequent. Of the finer biochemical processes that take place in fecundation we know next to nothing, and even gross chemical alterations have not yet been studied completely. In certain constitutional diseases, for instance, chlorosis, tuberculosis, Graves' disease, it seems plausible to me that chemical changes occur in the secretions, even before the histologic structure of the genital organs becomes affected. But this problem has not yet been investigated, as far as I know, nor has the influence of food on the genital secretions been studied. The analogy with uric acid diathesis seems to offer itself. I also suspect that certain sexual practices, such as prevention of conception, if carried on for too long a time, may render genital secretions abnormal.

It is easy enough to test the alkalinity or acidity of the genital secretions with litmus paper, and yet I have grown wary in committing myself too much on the ground of any slight alteration of normal reactions. I had a case in point but recently. A lady whose first child I delivered about three years ago, consulted me because of her inability to conceive anew. Examination revealed perfectly healthy genitalia, and only the vaginal secretion seemed to be more than usually acid. I thereupon advised douches of sodium-bicarbonate solution, but before the patient commenced this treatment, her menstruation failed to appear—she had become pregnant in spite of the strong vaginal acidity.

It is, therefore, with a great deal of reserve that I enter into the question of treatment in the category of cases sketched in the foregoing. Cutting open a small cervical orifice or sewing up one that is too wide reminds one unpleasantly of "the good old times" when the practice of gynecology largely consisted of these two procedures. Yet, if not done indiscriminately as of yore, these slight operations accomplish their object in many instances, and I feel convinced that the success obtained is altogether due to the chemical alteration of the genital secretion. The same is true of curettage in selected cases. It does not seem amiss to point out that an appropriate after-treatment may oftentimes render the result more certain.

The difficulty of suggesting the right kind of therapy is much greater when there seems to be no other tangible cause of sterility save a change

from normal chemical reactions. A trial with various vaginal douches is justifiable in such cases, although too much reliance cannot be placed on this method. I have had the fortune of curing quite a few cases of this kind by a course of tampon treatment, and I cannot help feeling that the success again was due to restoring chemical reactions to their normal conditions, but I am free to confess that the exact mode of such restitution is beyond my power of explanation.

Although the subject is distasteful to me personally, it is sometimes important to inquire into the details of sexual relations and to institute a sound sexual hygiene.

Finally, in general conditions, such as chlorosis, it is wise not to neglect the general organism and to influence slight local chemical abnormalities by an appropriate hygienic regime.

But after all has been said and done, we want to bear in mind that, if merely chemical factors seem to furnish the etiology of sterility, all our therapeutic efforts are largely of an experimental nature.

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PERINEPHRITIS*

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Inflammation of the perinephritic tissue may result from the rupture of a kidney, with the escape of urine into the surrounding perinephritic tissue. This urine forms a good culture medium for the growth of bacteria, which may come from an infected bladder, kidney pelvis, empyema or the neighboring colon into this tissue through the lymphatics or blood-vessels. Generally, the inflammation terminates in an abscess. It may be secondary to inflammation of the stomach, colon, liver, gall-bladder, necrosis of a rib or the vertebral column, calculous, tubercular or other inflammation of the kidney. The different bacteria of erysipelas, typhoid fever, smallpox, diphtheria, puerperal infection and abscesses in other parts of the body, circulating in the blood-vessels and lymphatics of the kidneys, pass through the connecting lymphatics or blood-vessels of the less-resisting perinephritic tissue and cause inflammation. These bacteria usually need the additional insult of an injury to these parts to cause perinephritis. The inflammation may terminate with the formation of pus, or in milder forms there is an exudation of fibroplastic material. The exudation contracting about the kidney causes severe renal colic.

The following case reports are examples of perinephritis from injuries:

Case 1.—I was called by Dr. J. to see a mechanic, March, 1911. One month before I saw him he had fallen about six feet, striking his right loin and back against the edge of a wheel. Following the injury he had nausea and vomited. This was accompanied by rise of temperature and chills. He complained of severe pain in the region of the right kidney and liver; at the time of examination I also found rigidity of the overlying muscles. There was marked tenderness, increased by pressure. He stated that the pains radiated to his back and down the right thigh. Inspection showed some fullness of the right loin, also dullness on percussion. His tongue was dry and furred. The urine was dark red, no albumin or pus. He consented to an operation the following day. At the operation I found a very large abscess surrounding the kidney, and although the kidney could easily be palpated, there was no communication with it. We introduced a large-size split-rubber drainage tube, filled with gauze, to the bottom of the abscess cavity. He made an uneventful recovery.

Case 2.—Sept. 10, 1911, I was called in consultation to see a man who stated he had been kicked in the left loin and back by another man about two weeks previous, since which time he had suffered severe pains in the region of the left kidney and back. At the time of examination we found his temperature 101.5 F., pulse 96, hands and tongue tremulous, the latter dry and furred. He presented every indication of having drunk to excess. There was bulging over the left kidney, dullness on percussion, and excessive tenderness and pain on palpation. We operated on him the next day and found an extensive perinephritic abscess. The after-treatment was the same as in the first case. His recovery was slower, because the alcoholic intoxication prevented rapid reparative progress.

Careful and extensive studies of Gerota, Tuffier, Lajars, Stahr, Morris, Rovsing, Kuster and others, have greatly assisted us in our understanding of the different modes of infection of this tissue, and the channels traversed by the offending bacteria. In the same way these pioneers have assisted us to foresee the complications and prognosis of this disease. Let us review the anatomy of the perinephritic tissue.

The fatty tissue of the kidney is surrounded by the fascia renalis of Gerota. This separates it from the retroperitoneal tissue except at the lower pole of the kidney, when it communicates with the retroperitoneal tissue. A rich network of lymphatics penetrates this tissue and connects with the numerous lymphatics of the kidney and these empty into the lumbar glands. The veins of the perinephritic tissue empty into the veins of the kidney at the hilus: also into the veins of the ureter and suprarenal veins. There is frequently anastomosis between these veins. Pathologists have often demonstrated that bacteria may pass through the blood-vessels and tubules of the kidney and be found in the urine. These same bacteria may reach the perinephritic tissue through its connection with the kidney as above mentioned and set up inflammation, especially if this tissue has been injured and has thereby become less resistant.

The symptoms depend on the degree of inflammation. In the mildest form there is only an outpouring of fibroplastic material and perhaps an increase of the fatty tissue. In the more

*Read in the General Session of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting, held at St. Louis, May 13-15, 1913.

severe infection in which we have pus formation, it may happen that only the upper perinephritic tissue is involved in abscess formation. In another form there is a breaking down of the entire perinephritic tissue and the whole kidney is surrounded by a large abscess. This abscess may rupture into the peritoneal cavity, causing suppurative peritonitis and death. If it ruptures into the pleural cavity, there are symptoms of empyema. There is dulness on percussion, bulging and filling out of the intercostal spaces, shallow, quick respiration, chills and elevated temperature. The abscess may rupture into the bronchial tubes, with expectoration of foul pus. There is frequently edema of the lower extremity, albumin in the urine from pressure on the kidney, furred tongue, fever, chills, pain in region of the kidney, increased by pressure or movement and rigidity of the overlying muscles. If the abscess makes its way toward the surface in the loin, groin or thigh, the skin is edematous and red before it ruptures or is opened by the surgeon. If it ruptures into the bowel we find pus in the stools.

We have to differentiate this condition from new growths. Tumors are slow growing. There is no temperature, no chills, no rigidity of the overlying muscles. Blood may appear in the urine. Pain is a late symptom, occurring when pressure symptoms occur. Later there is dyspnea, cyanosis, edema of the lower extremity. If it involves the right kidney, pressure on the bile duct will cause jaundice. If on the left side it may displace the heart and cause palpitation. Neuralgia occurs later and also curvature of the spine. In the malignant growths growing rapidly, occasionally there is fever. If we suspect calculi of the kidney as the primary cause we should have a radiograph taken.

Treatment.—The earlier the abscess is opened the better. One ought also be sure there is free drainage afterwards. If due to stone in kidney, remove the stone. If due to tuberculosis, remove the kidney; if the other kidney functionates, close up the wound after filling with normal saline solution. If due to appendicitis remove appendix. If it is secondary to other diseases try to remove these causes if possible.

Rosenberg collected reports of twenty-six cases treated expectantly with perforation of the peritoneal cavity, lungs, intestines, pelvis of the kidney, bladder and vagina, with fifteen deaths.

Morris states 33½ per cent. rupture into pleural cavity or lungs. Kuster reports 250 cases of perinephritis with 50 per cent. rupturing into the pleural cavity and lungs, 34 per cent. rupturing into other organs and the peritoneal cavity. Perinephritis is a rare disease. Socin found four patients affected with it in 16,661 cases. Sutton reports one in 4,437 cases.

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DISCUSSION

Dr. W. T. Elam, St. Joseph: The condition of perinephritis is most interesting, but on account of its rarity it is one that is not ordinarily recognized because it is usually associated with some preexisting or co-existent condition that causes it; and then, usually, the symptoms of perinephritis are obscured by the coexisting condition. When you come down to an absolute classification of perinephritis, the word "perinephritis" means truly an inflammation of the proper capsule of the kidney, although it has been taken, or has been made to include, by many surgeons not only the inflammation of the proper capsule but of the fatty connective tissue. As I understand the doctor's paper, he does not deal with a pure and simple case of perinephritis, because pure and simple cases of perinephritis rarely exist. Therefore, he deals more particularly with inflammation of the perinephritic tissue, or the fatty capsule of the kidney, so called. In this form of inflammation, we have three types in particular, namely, the form in which there is a chronic inflammatory process in which there is an increase in the fatty and fibrous tissue surrounding the kidney; in another form, probably a more extended form of this same disease, we have this same increase of fibrous tissue with a diminution of the fatty tissue; and then the form that the doctor speaks of and deals with more particularly, the suppurative form (acute form of perinephritis or perinephritic abscess). The cause of this condition may be trauma. That is, the resistance of the tissues may be impaired by this trauma, which may be due to a penetrating wound or a contusion in the region of the loin, or it may be, as is often the case, a punctured wound involving the perinephritic tissue. Usually, however, these cases are in connection, as I have said, with a previously existing condition. These tissues can be affected through the blood, the lymphatics, contiguous tissues and continuity of tissues. That is, we find in many instances of perinephritic abscess that they are secondary to kidney involvement, abscess of the kidney, so-called suppurative nephritis. We find that is probably the most frequent cause. It may be secondary to abscess of the liver, to involvements of the mesentery. It may be secondary to abscess of the appendix, where the appendix is placed retroperitoneally, or it may come about as a result of some disturbance of the circulation of the perinephritic tissue, or as the result of migration of colon bacilli through an inflamed or sodden colon.

These are the routes by which this tissue can be infected. It occurs occasionally independently of these, as a hematogenous infection, it is true, and when it does occur we find the symptoms the doctor spoke of, chills, fever and pain, with many times characteristic posture of the patient. Usually, you find the body bent or curved, the concavity being in the direction of the affected side. Many times, if it is around the lower pole of the kidney, or especially around back of the kidney, you find the leg drawn up. These symptoms are not alone characteristic of perinephritis, but are caused by other inflammatory conditions in that region, as, for instance, some of the lesions of the spinal column, psoas abscess, etc.

Now, as to treatment. The doctor refers to one case in particular, in which he speaks of the perinephritic abscess, which he evacuated and left the kidney untouched, although he had decided that the kidney was involved.

Dr. Jacobson: It was not involved.

Dr. Elam: Then I misunderstood you. The expectant treatment does not offer much in perinephritic abscess. Of eight cases, I believe, in the literature that I have seen, six of them who were treated expectantly died. Evacuation and drainage should be practiced early.

Dr. Jacobson (closing): I am glad that Dr. Jackson brought out the question of appendicitis. Of course, with careful examination of the patient and history of the attack, we might eliminate this cause or confirm it. I did not dilate on the causes of perinephritis: the appendicitic inflammation may have extended up there, the inflammatory condition may have extended up the perinephritic fat or tissue from the colon, or by traversing the lymphatics and blood-vessels, and involving perinephritic tissue. I thank Dr. Elam for dilating on the points I brought out in the paper.

TUBERCULOUS EPIDIDYMITIS WITH REPORT OF A CASE TREATED WITH INJECTIONS OF TRYPSIN*

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The question as to whether tuberculosis is primary in the epididymis, or whether tuberculous epididymitis occurs secondarily to involvement in the prostate, is not yet entirely settled, but this much is certain: Clinically we see the disease practically always associated with a tuberculous prostatitis. Barney believes the disease is practically always primary in the prostate and the epididymis is involved only secondarily. At any rate it is constantly to be borne in mind that we are never to expect, in dealing with a case of tuberculous epididymitis, that the prostate will be free from disease, and this even though we may not be able to demonstrate any gross lesion.

On the other hand the testicle ordinarily escapes. Baumgarten inoculated the epididymis of rabbits and showed that though the testicle remained free the disease rapidly ascended to the prostate. He also inoculated the bladder and found that the epididymis did not become involved. He concluded that the tubercle bacillus is unable to make progress in a direction contrary to that of the secretions or the lymph stream, but always travels with them. These experiments are in accord with clinical experience. Recent writers are agreed that it is exceptional to find any involvement of the testicle proper.

Bearing these facts in mind the objections to castration become immediately apparent. We are removing a healthy testicle and leaving a focus in the prostate. For this reason opinion is practically unanimous that castration should be performed only under very exceptional conditions. It does not cure the disease, nor does it protect the patient against a recurrence of his trouble on the opposite side. Bogoljuboff

showed in a long series of cases that such relapses were more frequent after castration than after epididymectomy, the proportion being 26 to 73 per cent. for the former, and only 13 per cent. for the latter. Furthermore, a recurrence on the opposite side after an epididymectomy may be viewed with reasonable equanimity, but recurrence after a castration will be regarded by the patient as a most overwhelming calamity. Double castration is practically certain to lead to impotence, if not immediately at least after the lapse of a few months or years, and the psychical effect on the patient is frequently very disastrous.

Epididymectomy must, therefore, be regarded as the operation of choice, although Hurry Fenwick states that it is futile, and recommends that the surgeon content himself with a simple vasectomy to protect the prostate. He brings forward no statistics and makes no argument. He appears to overlook the fact that the prostate must be regarded as already involved. Epididymectomy has given many lasting cures, and in the face of the very respectable mass of opinion against him, few will probably be inclined to accept this unsupported recommendation. We must not forget that the removal of a tuberculous focus will sometimes help inoperable processes elsewhere in the body and we must also aim to protect our patient against a chronic suppuration with its inconveniences and dangers.

But many cases are already bilateral from the time they first come under our observation, and not a few have sinuses. Some have already been subjected to a single or double epididymectomy and the condition has recurred. A conservative operation may still be applicable, but there will always be a certain number of cases in which the surgeon will feel compelled to choose between double castration and conservative non-operative treatment. It is of the conservative treatment of such cases that I wish especially to speak.

Let us remember that orchidectomy does not offer a cure. The disease remains in the prostate and seminal vesicles, and the attempt to remove these also has been pretty generally abandoned.

By conservative treatment we aim to preserve the man's sexuality, put an end to suppuration, and cause sinuses to heal. A number of methods are at our disposal. Tuberculin should be used with caution, but should not be forgotten, and the general hygienic treatment applicable to tuberculosis wherever situated should be instituted. It is however the local treatment on which we must in the main rely.

The parts should be immobilized as completely as possible just as we immobilize a tuberculous joint. This is best accomplished by the wearing of a suspensory. Exercise of any severity and even jolting of the body should be avoided. Bier's hyperemia should be given a place in the treatment, using a cup and bulb. Cups of a special pattern to contain the scrotum are provided for

* Read before the Society of City Hospital Alumni, Oct. 2, 1913.

this purpose. Sinuses should be injected. Beck's paste is valuable for this purpose, and a 10 per cent. solution of iodoform in glycerin has yielded good results.

A treatment recently highly recommended by Baetzner for the treatment of tuberculous bones and joints, is the local injection of trypsin. He uses the *Injectio Trypsini* of Fairchild, which is supplied in the form of a glycerin extract put up in ampules containing 1 c.c. each. Baetzner proposed the use of trypsin for this purpose as long ago, I believe, as 1908, but his work was at first greatly retarded by inability to secure solutions which were at once sterile and of uniform proteolytic power. He reports his methods in the *Practitioner* for January, 1913, and is now satisfied with his technic. He injects from 1 to 2 c.c. of *Injectio Trypsini* (Fairchild), diluted to 10 c.c. with physiological salt solution, in the region of infected joints. He has also used injections remote from the seat of the disease, and while he has found them beneficial he thinks they possess no advantage over the local injections, and are therefore not to be recommended. He claims that no anaphylaxis is to be feared, and therefore there is no danger of giving too many injections, although two or three are often sufficient. Symptoms rarely follow. Occasionally, he has seen violent inflammatory reactions with general rigors, but only when he was dealing with closed cavities containing large accumulations of tuberculous detritus. Trypsin itself he believes to be harmless to normal tissues, even when doses up to 3 c.c. are employed. In describing his method, he says:

"All the observations point quite definitely to the fact that in diseased tuberculous tissue, the influence of trypsin given by injection, calls forth a twofold reaction: the destruction and absorption of those cells too far affected for recovery, and, on the other hand, the formation of new and normal cells, with a metaplastic recovery of some of the diseased cells. Both these reactions are induced by the hyperemia, which seems to be the direct response within the tuberculous areas to the trypsin injection."

He warns us that a point likely to be overlooked at first is the fact that ferment solutions are destroyed by heat above 80° C.

Baetzner's report encouraged me to use trypsin in a case of bilateral tuberculous epididymitis where suppuration and sinus formation had recurred after operation.

The patient was a man of 30, who had suffered from tuberculous coxitis of the left hip at 2 years of age, with sinuses. This finally healed but left him with a much shortened left leg. At the age of 25 he had a urethritis, which he was told was gonorrhea and which got well, to all appearances. At the age of 28 he noticed a swelling on the right side of the scrotum and soon a sinus formed. Quite recently he noticed also a nodule beside the left testicle as well. Prostate and seminal vesicles appeared normal to rectal touch, but the urine contained shreds.

A bilateral epididymectomy was done but suppuration and sinus formation recurred in due time on both sides. He was treated with tuberculin, beginning with a dose of 1/50,000 part of a drop, and with injections of bismuth paste, but was also injected with trypsin, beginning with about 15 gtt. and ascending to 1 c.c.

There was some local reaction after each injection but this promptly disappeared. At present his sinuses are both closed, but a nodule still remains on the right side. He maintains his full sexual capacity and feels very comfortable and happy.

I do not report this case as proving anything in regard to the trypsin treatment. Conclusions cannot be drawn from a single case, and this patient was given too many other forms of treatment to permit us to attribute his favorable course to the trypsin alone. I have, however, been unable to find any record in the literature of this treatment having been employed before in urogenital tuberculosis, and the fact that this case turned out well has encouraged me to report it in the hope that others might give the method further trial.

What I do wish to emphasize, however, is the importance of giving every conservative measure a prolonged trial before resorting to castration. Perfectly healthy testicles are being removed constantly, simply because the epididymes are involved. Such a procedure is irrational and harmful as has already been pointed out. It mutilates, but it does not cure, whereas conservative treatment will, in the considerable majority of cases, keep our patient happy and in the full enjoyment of his functions. It will close sinuses and stop suppuration, and lead in time to a symptomatic if not anatomically complete cure.

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SOME PRIMITIVE FACTS IN PSYCHIATRY *

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In no line of practice has the tendency to speculate and theorize been so great as in the line of mental and nervous diseases—substituting theory in the place of observation and experience. The reason for this is not hard to find; no anatomist or physiologist can demonstrate a mental phenomenon, a motor or sensory impulse, nor a specific conducting path to memory-receiving stations, although they exist. Much yet is to be learned of invisible nervous functions and much

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is beyond the ken of man to find out. Never had we more competent investigators, never were symptomatology and experimentation more refined nor observation and discrimination more alert, but human beings interested in this study may fear no monotony or monopoly of the subject from any source. If we would learn to recognize the evolution of disease in nervous processes, we should not only know approximately what is normal, but acquaint ourselves with the reaction and idiosyncrasies of the patient under examination, for exaggerated reactions play no small rôle in the pathogenesis of insanity. These reactions vary with conditions, for fluctuations in mental functions may occur at different times in the day in the same person. Psychiatry and its pathology does not begin and end in measuring the promptness of reactions, however, but does take into account the analysis of the attention, a study of the character of the individual reaction, of the anomalies of connected thought, the sharpness and correctness of individual judgment. While all forms of alienation are regarded as the result of bodily disease, in which the functions of the cerebral cortex afford the most prominent symptoms, the relation of body and mind, so enticing a field for study, is yet unsolved and no parallelism can be drawn between a whole series of events on the physical side with those in the mental sphere, and it does not seem profitable theorizing to establish a philosophical creed.

Good authorities, among them Wernicke, believe that mental disorders are essentially brain diseases, not localized but general. But this theory needs revising. We can say positively that the gray matter of the encephalon presides over cerebration and is connected with all the special senses by means of nerve fibers known to us as associative memory tracts, that carry all sensations, termed stimuli, to the cerebrum or mental processes. These associative tracts as well as mental processes have only an elementary function at birth, carry and receive only the most common sensations of pain, hunger, thirst, etc., the most primitive functions of consciousness. These functions develop with the infant, and the next acquisition is a memory-picture, one where the recollection is established in the processes; later is developed, in order of sequence, the emotional, volitional and affective—then the power to discriminate, or judgment, is developed later—at maturity.

You will readily understand that children and very primitive, or ignorant people, whose association paths have been traveled by sensory impressions only, could have no systematized delusions, but would suffer only from the primitive ones of fear, apprehension, imaginary goblins, rage, etc. But when an adult, developed in the faculty of reception, retention and elaboration of sensory stimuli, complains that he is tor-

mented by invisible spirits or that he is haunted by ghosts, the cause of the incorrigibility of these ideas is a more complex one and means the complete dissociation of individuality by interference in function of the associative tracts; consciousness is greatly overshadowed as in all delusional states, the organic sensations are perverted and his personality is lost in part or in toto; his surroundings are misunderstood and disorientation obtains; and we can apply Milton's panegyric, "Where all life dies, death lives, and Nature breeds perverse."

These storehouses of knowledge, termed mental processes, not to be pointed out and labeled, are developed by education and experience, storing impressions good and bad to be digested and elaborated, which constitutes judgment. This explains why we are largely what we make of ourselves, for we can preside over the character of permanent impressions which in early life makes for destiny, and it also justifies the importance of proper environment in the making of character. So in this sense ignorance can be inherited. The paucity of all kinds of impressions in the child may retard or defeat the growth and functions of the mental processes, and reasoning remains rudimentary and responds only to the most primitive needs of the body.

But notice the development of a child at some public place, who is fondled and humored and quizzed, and his faculties are stimulated by things bright and interesting, and see how resourceful and attractive such a child becomes.

I wish, in order to be thoroughly understood, to repeat: We are receiving numberless impressions or stimuli every wakeful moment by way of sight, hearing, feeling, etc., as well as the organic sensations of consciousness, of inward origin, which are enlarging our experiences by way of new sensations, or by confirmation of old ones. We have this same thought from our philosopher Emerson. He tells us of his morning walks along the country road. He chanced to meet a laborer going to his work. Each gives his own peculiar morning greeting as they pass. Farther on he meets another, and all unconsciously he observes his carriage, his demeanor, his salutation and guesses at his disposition, habits, education, etc. When he arrives at home he recounts all that he has observed in this hour's diversion. He feels that he has become so intimate in the knowledge of those men that he can call them brother, and all this without more than a passing nod.

How valuable and of what great interest this thought should be to us, to know of this secret capacity within us that we can store up what we wish, and what will in the young make for character! Again, thought without attention is inconceivable and when voluntary attention is disturbed, as in stuporous states, sleep or dementia,

perception is at fault and requires a greater external stimulus. Again, the intensity of perception depends on the amount and character of the stimulus, and the power of the nerve tract to receive and transmit impressions to the central area.

The amount and intensity of the flow of energy, or stimuli, give character to the thought—when there is a weak or diffused discharge of energy our impressions are faint and are easily forgotten. These faint and imperfectly elaborated impressions are often referred to as sub-conscious. The faintness of impressions makes them elusive and become a source of mystery, but such expressions as unconscious mind and sub-conscious self are meaningless and a play upon words.

While it is possible to find certain structural changes in the brain in many cases of alienation, we repeat that the exact relations that these bear to the mental symptoms cannot be conjectured, for the point of discharge for efferent impulses cannot be considered as forming the limitation of centers. Neither can mental diseases be anticipated nor a definite connection be made where it follows in the wake of physical diseases; for instance, you have a case of typhoid fever which is followed by a psychosis: is the fever the sole exciting cause or are there other provocative factors concerned? The latter view is likely the correct one (Paton).

Dementia paralytica is not looked upon merely as the consequence of prolonged overindulgence in alcohol, or of a specific infection, but the one so affected is regarded as having been "half born a paretic." Hysterical traits are not born with the subject, but probably functional defects in the nervous system out of which the hysterical character develops whenever there is sufficient provocation.

Wernicke's theory of essential disease of the brain in all mental disorders would seem to be disproved by well-known psychoses. For instance, there is much evidence to prove that dementia paralytica is a result of a toxic condition and the origin of the toxin outside of the brain; this cannot be said to be a purely brain disease.

Mental disturbances following myxedematous states, which are known to be associated with disturbances of the thyroid gland, is another refutation of this theory (Paton).

With a better understanding of mental processes and a more accurate knowledge of the anomalies of its function, and with a more scientific classification of the various psychoses, we are recognizing incipient functional defects by the score that were formerly passed by, unnoticed; but even this cannot explain away the fact that we are, as a nation, rapidly becoming neurotic.

While a paper of this kind is almost necessarily dry to one that gives this branch of study no

particular thought, I feel that this article might after all be amiss and of very little value if it did not point to something immediate by way of warning.

What can we do in a preventive way to check the growing tendency of the times, to nervous weaklings and predisposed insane, to be wards of the state and a menace to society? Restrictive marriage laws are of the first importance. We recognize that chronic alcoholics beget idiots, moral perverts, criminals, hysterics, neurasthenics and drunkards, and that insane subjects, however long the remission of health has been, are unsafe to marry. We do not gather figs from thistles. If you will observe any promiscuous gathering of people that walk our streets you can point out by the score the unfit—imbeciles, epileptics, paralytics, neurotics and habitues of various kinds and many other stigmata. Yet all are free legally to marry and raise dependents.

Preventive Steps.—Children should be examined as to their capacity for study before entering school, and all should be taught to their several limits, but many are unfit for class study and are injured for life by promiscuous studies. Some are born for taking on an education and others are not, except at the expense of invalidism now or later. It has been for a long time the custom of advising marriage in neurotics, with unstable temperament, either moody or erratic or intemperate, given to excesses of all kinds, incorrigible, roaming and profligate; and parents have consulted you of the advisability of marriage as a correcting force. Do not be deceived. The fountain head of moral obliquity is systemic and constitutional, and is beyond the obligations of pledges and rituals, for settling down after marriage is not warranted by experience. He is a sick man and should not take on a responsibility, if such a thing were possible; but it is not, and if a "nuptial psychosis" is averted, what can be the product of conception but defectives, undesirables and dependents.

Never give your consent to blast the hope if not the life of the inexperienced, trustful, but thoughtless girl, who too often needs advice by way of warning that does not come. These are only suggestions that some future time will deal with, for we have it that "sufficient unto the day are the evils thereof."

One thing seems probable: like the poor, they will always be with us in some degree and let us hope that the ratio of the normal to the abnormal may keep in a safe acting majority at all times and on all occasions, and that the physicians may keep apace with the etiologic factors at work to further enslave, degrade and destroy. For without him who can guide? Surely our opportunities were never so great for good nor our armamentarium so efficient. Stand foursquare on moral questions. Never take an untenable stand.

Be vigilant in and out of season and recognition should mean preparedness. Are we equal to the task?

NOTE.—I have drawn largely from "Paton's Psychiatry" in the embodiment of this paper.

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THE RECTAL PLUG*

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It is not often that one feels called on to select a subject in order that he may condemn it, but the "rectal plug" has caused so much discredit to proctologic operations—more than any one thing ever invented—that I believe I am justified in taking up this subject, especially in view of the fact that the plug is still used, and the literature confirms its use.

Just where and how the rectal plug originated, I am unable to state. It is seldom that anything which has been in use so long deserves so little credit. It suggests of quackery, but whether it is one of those things that have crept into medicine from this source, I am unable to learn.

The rectal plug has been spoken of as the tampon, tampon-cannula, rectal tube and other similar terms, but its effect is the same by whatever name it is called.

The rectal plug is used most frequently following hemorrhoidal operations, although it is used in other proctologic operations, especially those for polypus, prolapse and fistula.

The reasons given for its use, by advocates, are that it prevents hemorrhage by gentle pressure against the wound; it allows considerable hemorrhage to show itself on the dressings; that through the tube, possible bleeding can be detected, and it foretells a possible internal hemorrhage. The most uniform reason given is that it allows the escape of flatus. It is also used for the purpose of giving an enema the fourth day after operation, and it acts as a splint to the sphincters.

The plug placed in the anal canal, after an operation, acts as, and is, a foreign body. It produces irritation, especially to the sphincter muscle. As soon as the external sphincter muscle recovers its contractibility, it tightens in an effort to expel the plug. Normally, this muscle is in a state of contraction, just sufficiently tight to close the anal canal. From my understanding of a splint, I cannot see how the plug acts as such when the muscle is in an unnatural position. The extreme contraction of the external sphincter muscle is the most painful condition of this sensitive region. The pain does not cease

until the muscle is paralyzed, or the plug is removed. Such a plug is torture and has produced many ill effects. Many a patulous anus has been the result.

As far as the benefit from allowing the escape of flatus is concerned, I can see no advantage, provided the bowels have been properly cleaned and are kept regular; i. e., are moved every twenty-four hours, following the operation, by the cold enema.

I believe the plug rather increases the danger of hemorrhage. The stretching of the parts opens the wound and assists in the escape of blood rather than allowing the sphincters to contract, thus closing the anus and assisting in the formation of the clot.

The most important objection to the use of the rectal plug is the fact that its use makes it necessary to constipate the patient for several days. It is important that the bowels be kept regular by the cold enema. We should not think of allowing the patient to become constipated following proctologic operations any more than following operations on other parts of the body. Why change our principles of surgery when we come to proctologic operations? We know that the absorption of toxins during constipation has a detrimental effect on tissue repair.

If one must, for any reason, use something in the anus, a strip of gauze should be preferred, not to permit the escape of flatus, but that contraction of the sphincters may be stimulated. The attendant should be instructed to remove the gauze at the first sign of contraction, otherwise unnecessary pain will result.

I do not believe that there is any reasonable excuse for the use of the rectal plug and that it is torture that is absolutely unnecessary.

DISCUSSION

Dr. T. E. Potter, St. Joseph: I know all of us would like to agree with the essayist. I am sorry to say that I do not. In the practice of surgery a successful man must use common sense and not follow without exception any absolute set of rules.

If the comfort of the patient is alone considered, in any kind of operation on the rectum, a plug or tube should be dispensed with, provided it can be done with perfect safety to the parts. I do not believe this can always be done. There are times when it is absolutely necessary to use a rectal tube to allow gas to pass off freely, and to prevent any distension of the ampulla and to overcome, to some extent, the effort of the sphincter ani to contract. It is not inserted to prevent hemorrhage.

In a case of complete laceration of the perineum, where the accident has occurred some time before and there is incontinence or retention of fecal matter, the patient is in a deplorable condition. To make this operation successful every effort must be made to take care of the sphincter ani, to get union between the edges that have been torn, and at the same time to preserve the integrity of the sphincter ani. I do not believe this can be done successfully without the insertion of a good-sized tube to allow the gas and liquid fecal matter to pass off without exciting too much

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sphincter contraction, which causes the torn edges to separate. I usually make the Howard Kelly operation and after this I find the tube a valuable asset. If there is too much pain, morphia should be used sufficient to make the patient comfortable. After two or three days remove the tube and in four days move the bowels with castor oil, assisted by an enema of olive oil.

Dr. Francis Reder, St. Louis: The rectal tube evidently has few friends among us. We must not be too severe on the rectal plug, or tube, as you choose to call it. Much depends on the character of the rectal lesion and again much depends on the man who is doing the work.

I am sorry that Dr. Barnes incorporates in his paper the idea that the rectal tube may be responsible for exciting or producing a hemorrhage. In fact the tube is introduced as an aid in checking the oozing or bleeding from the wounded parts, and acts as any ordinary tampon would when applied to a bleeding surface in any part of the body.

As for the comfort of your patient, it can be said that the condition which necessitates the introduction of a rectal tube is usually of such a nature that instead of the tube causing pain or aggravating any existing pain it will give comfort and even mitigate any pain. Again, there are certain surgical traumas of the rectal region that necessitate the introduction of the rectal tube to insure peace for the surgeon. It is exceedingly unpleasant to be called out at the midnight hour to a patient operated on and find the ampulla of the rectum full of clotted blood. The assurance of comfort we find in the tube by freely permitting the escape of flatus, especially in the aged, invites rather favorable criticism for the tube. It is not necessary to allow the rectal tube to remain longer than forty-eight or seventy-two hours. A tube lightly wrapped with iodoform gauze and well anointed with vaseline can be expelled by the patient after an enema has been administered (through the tube into the bowel) without pain.

The rectal plug will always have its friends, gentlemen, in the proctological section.

Dr. E. H. Thraillkill, Kansas City: Like Dr. Barnes, I never employ the rectal plug or tube. The tube on the market is an inch or more in diameter and 5 or 6 inches long. Those who use it wrap it with gauze, then place over the gauze a piece of rubber tissue—to facilitate its removal, I presume. Sometimes the latter becomes dislodged, granulations spring up in the meshes of the gauze, causing intense pain and slight hemorrhage, with a destruction of the newly made granulations while the tube is being removed.

This tube is held tightly by the sphincter muscles, the upper end extending at least 2 inches into the ampulla. Instead of the feces passing out through the aperture it packs around the tube, resting against the sphincters, causing irritation and aggravating spasmodic contractions. I would like each advocate of the tube to place one in his own (healthy) rectum to-night before going to bed. I trust his room is not near mine, as I would like to sleep undisturbed. When the tube is in position, the spasmodic contraction of the muscle brings the pile stumps forcibly against this foreign body. Better surgeons than myself use the tube, but I do not approve of the use of either plug or tube.

Dr. T. J. Beattie, Kansas City: I agree with the essayist, and I want to say that a few years ago I used, as Dr. Potter seems to be in the habit of using, a drainage tube in the bowel for these complete lacerations, to allow the gases to pass out. I quit doing that. I expect Dr. Potter has had more experience in this work than I have had, but I have observed that whenever you use a drainage tube or any foreign body in the rectum where there has not been a pretty thorough dilatation, as Dr. Reder says, almost paralysis, you will get what Dr. Thraillkill says is extreme pain; and I quit using it for that reason.

I believe the bowels in these cases of complete laceration of the perineum should be let alone. You should get your patient in a condition so you can let her alone three, four, five or six days, then put your sutures in that laceration properly. I believe a little gauze will take the place of the plug and cause absolutely no pain. It is unnecessary to use the plug for fear you may have hemorrhage, because in any operation on the rectum you ought to be thoroughly satisfied, absolutely satisfied, that you are not going to have hemorrhage, and a plug will only add irritation to the parts. My experience has been in cases of complete laceration of the perineum that the plug is not a good thing.

Dr. Ernst Jonas, St. Louis: Generally speaking, I believe the rectal tube should be absolutely condemned. If there is one class of cases in which I might consider the rectal tube proper, it might be for the after-treatment of personal enemies, since I believe that the rectal plug is one of the most painful and most barbaric instruments that I have ever come across. I go a little further than the essayist in his paper, and argue that the gauze with vaseline should be left out completely too, after all rectal operations. If you use neither the plug nor the gauze, then I think our patients will usually be fairly comfortable.

Dr. H. J. Jurgens, Edina: I used to do hemorrhoidal operations according to the old methods of Tait, and I had considerable pain with the operation. I had one very unfortunate experience when I had to make a trip in the middle of the night with the temperature about 3 below zero, in the country, to stop hemorrhage. Shortly after I went to Utrecht. They were operating on hemorrhoids with the cautery. They introduced the tube. I was astonished. I asked them if they did not have trouble. They took me through the wards, and they had eleven patients there who had been operated on in this way. I asked them if they had introduced tubes, and they said yes. I asked them if the patients had pain, and they said no. "Any increased bleeding?" They said there was no bleeding, that was why they used them. I came back home, and shortly after, at a meeting in Quincy, Dr. Pendleton of Chicago made a demonstration there in St. Mary's Hospital on hemorrhoid operations without any suture, without any cautery. He simply removed the hemorrhoid, introduced the plug. There was no bleeding. We followed up these cases. They had no pain, no hemorrhage. Since that time I have been using this method and I have had no trouble either.

Dr. Rollin H. Barnes (closing): I am pleased that this paper has brought out the different views on this subject for I am aware that many such opinions exist among the profession. This is not the first discussion I have had in medical societies on the rectal plug. Before the American Proctologic Society, in 1910, I differed with Dr. Pennington's use of the rectal tube as a splint. As I sat down, Dr. Adler whispered that Dr. Gant was not using the plug. This goes to show that the use of the plug is being done away with. After you have tried operating without the plug you will never use it again.

Dr. Potter said in perineal operations, the plug minimized the contractions of the sphincter which would tear the stitches out if he did not use the plug. The plug irritates and causes more contraction.

Dr. Potter: Yes, but they don't tear.

Dr. Barnes: Yes, but they will at times, especially if you don't paralyze everything, which is not a good thing to do.

Dr. Reder does not use the plug as long as the literature will teach you to use it. It says to keep the tube in for four days. That means constipating your patient for four days. I think it is the general opinion of physicians in the general treatment of diseases, primarily to keep the bowels from becoming constipated. If this is not done we find there is absorption

of toxins which lower the resistance of the tissues against general repair.

I use the cold enema to regulate the bowels. The enema is not generally understood. I limit the amount that should be used by the patient to a pint (whether hot or cold). The cold enema is the best means we have for regulating the bowel. It should be used at a regular time. In operative cases, even where I have amputated the rectum, I use the cold enema the next day to move the bowels, and every day on which they do not move of their own accord. If your bowels act you do not have so much flatus. Nothing will do better, without upsetting the general digestive process, than the cold enema, properly used, for regulating the bowel action.

Water is a better solvent of feces than olive oil. Olive oil is a lubricant and should be so used. Mr. Hertz, in his book on constipation, says water will dissolve twelve times as much fecal matter in the same length of time as olive oil. For this reason I prefer water and the cold stimulates peristalsis.

I maintain that the rectal plug is unnecessary and is a torture. You will find advocated in the older books the use of a tube 8 inches long, wrapped with gauze until the center has a diameter of 2 inches. This will be forced into the rectum and kept there for four days. I can not see how anybody could keep it up. I can not condemn it too strongly and have failed to find in the literature one sound reason for its use.

CLINICAL OBSERVATIONS IN BACTERIAL THERAPY

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Theoretical opinions reached from philosophical reasoning will have to be proved by clinical experience before full confidence can be reached in any remedial agent which is given us for the cure and relief of suffering humanity. Bacterial therapy has been proved theoretically correct, but clinical evidence has not been furnished in sufficient abundance to secure for it the full confidence this branch of medicine should enjoy if its merits were fully known. To add a little mite to this evidence is the prime aim of this paper.

It is not my intention to explain the workings and the *modus operandi* in which these dead bacilli work, but rather relate my own clinical experience with them. In order to this properly I will have to relate a few cases at random in which the remedy was used.

I began the use of bacterins about a year and a half ago. The first case in which I employed the remedy was in a case of infection of the uterus. The infection dated prior to the birth of the child, which lived only two days, dying from the effects of the general infection which prevailed in the mother at the time of its birth. Labor in this case was normal and was terminated without instrumental aid. The mother had suffered with a leukorrhœal discharge for more than

a month previous to the confinement. This infection seemed to involve the whole uterus and did not subside after parturition. After the birth of the child a general metritis set up which soon spread to the thighs and legs, a typical case of phlegmasia alba dolens. The infection spread and the patient kept on sinking until I thought, and two consultants agreed, that there was no hope for recovery. We gave her a strain of stock bacterin of streptococcus and staphylococcus and repeated the dose at intervals of twenty-four hours, doubling the dose with each injection. Prompt improvement followed up to a point where it seemed that the patient would neither get better nor worse. Then we began to change the strain of germs and gave her Neiser's polyvalent bacterin, when the case went to uninterrupted recovery.

I tried the bacterin treatment in one more case of childbed fever, with good and prompt results. The last case, however, was not severe and would in all probability have recovered without the bacterin treatment. Yet I think the bacterin injections shortened the time of illness.

The bacterin treatment has been given a trial in four cases of infection with the streptococcus, to which we apply the loose term of erysipelas. The first case was where the face and scalp were involved and was rather rebellious to remedial agents. The case had been under treatment for about three weeks when I saw the patient. Two injections of the streptococcus bacterin gave relief and removed all symptoms of the disease, and the patient has remained well ever since. No other internal or external treatment was given.

The second case was one where a blow on the face had injured the tissue in the nose. When I saw the case the nose and face were greatly swollen and the patient was complaining of pain running back into the head. An antiseptic oil was given to swab the nose and two hypodermic injections of streptococcus, about a week apart, were given. Recovery was nearly effected by the first dose, but as the patient was feeling an occasional pain, the second dose was given. The third case of streptococcus infection was in a woman about 55 years old, who had been kicked on the hand while attempting to milk a cow. The skin was broken and a day afterward she noticed a swelling and red streaks running from the hand up to the elbow and felt an occasional pain under the arm. The hand was painted with iodine and a glycerin poultice applied over the swollen and painful part. Two injections of streptococcus were given, one day apart, which completed the recovery.

Sometime since I was called to a neighboring town in consultation with another physician to see a woman who was suffering with anal sinus. We ordered two enemata daily, one in the morning and one at night, with a normal saline solution. This was done in order to rid the colon

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and rectum of all fecal matter possible; then we put a plug of cotton at the upper end of the rectum in order to keep the feces out of the blind fistulae. At intervals of five days injections of the colon bacillus were given. The treatment was administered by the attending physician with the result that a few treatments healed the openings into the pelvis through the rectum.

I have given the bacterin treatment in several cases of acne and in each case the treatment pleased both the physician and the patients. Cases of acne are very discouraging to the general physician; yet I do not know of any kind or class of cases that are more thankful than patients who have been relieved of a rough face. I believe such cases are very often forerunners of more serious infections, especially diseases of the eye, iritis and keratitis.

I have used the bacterin treatment in three cases of pneumonia. The first case was that of an old lady who suffered with a severe bronchopneumonia. One of the most distressing symptoms was a severe dyspnea which made its appearance each night. After the first injection of a strain of polyvalent pneumococci the patient rested much better; two more injections completed the cure. The next case of pneumonia was in a young girl, and three injections were given without any notable results on the progress of the disease. This, however, was a mild case and recovery was uneventful. The third case was a very severe one, in a man about 60 years old. The onset was sudden and severe, and delirium was present from the beginning. The first dose was given on the third day of the disease. The temperature promptly dropped from 104 to 101 F. Two more doses were given at about twenty-four-hour intervals. The case made an uneventful recovery.

I have given five injections to persons who seemed to be taken down with typhoid fever. The headache and the evening temperature resembled at least the prodromal symptoms of typhoid fever. Rather large doses were given and each patient suffered a sore arm, but the symptoms promptly subsided. It is not claimed by me that the diagnosis in these cases was positive; all I can say is that it looked like typhoid fever and I gave them the preventive treatment, and none of them developed typhoid fever.

I have given the bacterins in throat affections where I thought the infection was due to the streptococcus, and in each case I have had pleasing results. Last, but not least, I have treated about fifteen cases of gonorrheal infection with the Neisser bacterins. All the cases treated recovered in a shorter time than they would have if the bacterins had not been used; the pain in the urethra at micturition is greatly reduced. Strong medicines for injections into the urethra are always avoided for the reason that I believe the cases are really cured by Nature, which forms

an antibody or an antitoxin to fight the disease. Patients have told me that within two hours after a bacterin injection they felt much easier in the affected parts. At any rate every patient came back for the second and third injection, and always with a good word for the treatment.

A confrere once told me that it seemed to him that I was pushing the bacterin medication, to which I replied that these therapeutic agents were pushing themselves and it would be unwise to try to stop the pushing. It seems to me that bacterial injections under the skin are the very best blood-builders. One weak and anemic patient to whom I have given five treatments for a general catarrhal condition throughout her system has been greatly benefited. The blood, when I began to treat her with bacterins, looked dark and black, but now it look bright red. She feels much better and has gained in weight, eats and sleeps well, and has given up taking medicine. She takes one bacterin injection a week. I have never asked her to come back; she always comes back of her own accord.

I forgot to state that lately in cases of sore throat, where I am unable to differentiate between diphtheria and tonsillitis, I give both the diphtheria antitoxin and an injection of special throat-streptococcus bacterin. No harm is done in these cases and we hit the disease a double lick and thus make sure to stop its further invasions. Pus in a cavity should always be evacuated, since such pus is virtually outside of the body and bacterin has no influence on it.

The use of bacterins grows; the more one uses them the more use he finds for them. A day seldom passes in which I do not give from one to ten hypodermic injections of bacterins. I do not have to persuade people to let me inject them; they ask for it themselves. Bacterin therapy has come to stay. Of course a correct diagnosis is necessary for success with this remedy as well as in any other class of cases.

DISCUSSING ulcers of the rectum in Keen's *Surgery*. Vol. VI, p. 626, Robert Abbe, of New York, remarks that "in the treatment of the syphilitic lesions, salvarsan seems to offer wonderful results. In cases that have resisted mercurial treatment it certainly should be used. Its primary use (after diagnosis by the Wassermann reaction) is widely advocated."

PROF. EDWARD MARTIN, of the University of Pennsylvania, writing on the treatment of syphilis in the latest volume of Keen's *Surgery*, Vol. VI, p. 111, says: "Salvarsan is indicated in all stages of syphilis. Given in full dosage and repeated in seven days, it produces its maximum safe effect, and if used in the early stages of chancre, seems capable of producing an immediate and permanent cure. The lesions of syphilis yield more promptly to salvarsan than to mercury, and the Wassermann reaction becomes negative in a larger proportion of cases. It is generally accepted that salvarsan should be supplemented by mercury, the latter being given in doses as large as are compatible with bodily and mental vigor, preservation of appetite and digestion, free elimination, and the holding of the normal weight."

THE JOURNAL

OF THE

Missouri State Medical Association

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EDITORIALS

HOME. SWEET HOME!

A study of modern municipalities reveals some rather curious things. We find that one city has progressed with wonderful rapidity while another has stood still, or even retrogressed. In some instances this difference can be accounted for by industrial development due to location, market facilities, transportation, natural resources, and what not, that has put a certain city ahead of its neighbor. But occasionally we find a city devoid of all natural advantages outstripping some other municipality which possessed the things that should have made it great.

Berlin is a modern instance of such a remarkable growth. Situated in the midst of a flat and dreary plain, surrounded by sand dunes and pine trees, on a comparatively small stream, the little "fishing village" has beaten out old and venerable cities like Cologne, Frankfurt, Munich and Hanover, and is now giving Paris and London a big scare as an active competitor for one of the world's greatest international centers.

The reason for this is easily found. Read any book on government to-day and it will tell you that Berlin is the first city in the world in the development of municipal science. It has recognized the fact that municipal government is a true science, and a highly specialized science. A bricklayer would stand just as much chance, of being elected mayor of Berlin as he would of getting a professorship of romance languages in the university, or being called to the Charité Hospital to remove an inflamed appendix.

Well, what about it? Why drag these well-known facts into the columns of a medical journal? Because, naturally, in such a scientifically governed community one of the first considerations is the prevention of disease and the care of the sick. Thousands of men go to Berlin to-day to get their final training in medicine, for the Berlin municipal hospitals are the finest in the world.

Did anyone ever hear of a man going to St. Louis for his final training in medicine? Doctors pass through St. Louis every day on their way to Chicago, Philadelphia, New York and European

cities to obtain that larger experience in the treatment of the sick which St. Louis could give them if it would. They do it regretfully, and wonderingly inquire why the metropolis of the state does not rise to her opportunities and her responsibilities in the care of her people. But St. Louis is a wretchedly governed city, a city that can't even build a bridge, or keep the monkeys in the park housed in winter. Why wonder that there should be trouble with her hospitals? The people blame the hospital board, perhaps, or cry "politics" or shrug their shoulders according to their several temperaments, without getting at the root of the matter. The trouble is much deeper than the hospital board. The hospital board would build an infectious disease hospital to-morrow if they could, but the people don't see fit to furnish the money, so children are stacked away *en masse* in a fire-trap building to acquire diseases they do not already possess. No doubt the hospital board would appoint a superintendent at the City Hospital, if they could, and not wigwag over the problem for three months, but they are not given the power. That is a plum that must be kept as a reward for services rendered. The hospital board might have some choice of properly trained specialists for the Snodgrass Laboratory, but they can't go outside of St. Louis to look for them. The qualification for a pathologist or bacteriologist is—to have voted twice in St. Louis. And finally, the honorable assembly caps the climax of its hospital absurdities in the enactment of an ordinance limiting the hospital interns to graduates of St. Louis schools—which might be worthy of the editorial comment it received in the press if the whole city government of St. Louis wasn't such a huge joke.

DAIRY CONDITIONS IN KANSAS CITY

The first report of the Milk Committee of the Consumers' League of Kansas City has just been published. The condition of the milk-supply of Kansas City is probably no worse than that of many other cities of our state, appallingly bad as it is. Out of the 363 dairies supplying milk to Kansas City, according to the scores given by the City Board of Health in their last report, there were five good dairies, twenty-six fairly good, forty-five in the doubtful class and two hundred and seventeen that should not be selling milk at all. On the dairies supplying the city hospital with milk, the committee reported as follows:

A visit to the dairy now furnishing the city hospital with about 110 gallons a day revealed the following conditions: The dairy was large, having two milking-barns. The first one was old, low ceilinged and dark. It was so cluttered with rubbish and miscellaneous

objects that the visitors had to grope their way about in the dim light. There were cobwebs, dust and dirt everywhere, and the air was filled with the smell of the ensilage, which the cows were being fed during the milking time. The series of milk-rooms were dirty and untidy. There were evidences everywhere that the flies had not been excluded during the summer. The new barn was large and light, and although the doors and windows were open there was here, as in the other barn, the smell of the ensilage. In among the cows that were ready to be milked were a sick calf, a sick cow and several children playing. Just outside the barn was the straining-room. It was unscreened, the door was open, and the strainer cloth that the milk was being strained through was black with flies.

Among the bacterial counts published against the dairy from November, 1912, to August, 1913, are the following: 2,540,000, 2,600,000, 525,000, 1,540,000, 940,000, 680,000, 2,060,000, 2,000,000, 1,130,000, 2,000,000, 1,480,000.

The conditions are no worse, in fact not as bad, as exist in the greater portion of the dairies supplying private families. They found one dairyman selling milk for 8½ cents a quart for family use and milk for babies for 10 cents a quart—the only difference was in the price! They found one of the most dangerous places, from the standpoint of sanitation, selling milk for 12½ cents a quart, and one of the cleanest selling for 8½ cents. Of the dairies on the "white list" (besides dairies supplying certified milk) only three supply families and two whose product is consumed by hotels.

The report of the committee, which is composed of the best women of Kansas City, should be a warning to other cities of the state and should bring about a radical reform in Kansas City in the methods of dealing with the supply and control of the sale and handling of milk by most rigid laws with a proper body to enforce them rigidly. A failure on the part of Kansas City to respond to the findings and the excellent recommendations of its women will be a disappointment to every physician who knows the death-toll from rotten milk.

Here is more argument—a more appealing one we cannot conceive—for one of the leading newspapers of Kansas City to take up the battle for health. The earnest band of women can accomplish little in reforming the dairies unless the people awake to the necessity of compelling dairymen to maintain sanitary dairies. We have commented in another column on the magnificent work of the *St. Louis Republic* in promoting healthful conditions in that city. If one of the influential newspapers in Kansas City will take up this fight for the health of her people a milk law will soon be passed; and numerous other conditions inimical to life and health would be discovered and corrected. Until newspaper co-operation of this kind is extended there will be no radical and permanent reform in health conditions.

ELIXIR DIGESTIVUM COMPOSITUM, N.F.

It has been shown again and again that pepsin and pancreatin cannot exist in one and the same solution for any reasonable length of time. For this reason liquid preparations purporting to contain these two ferments are scientific absurdities and are sold under impossible claims. Nevertheless, these products are offered for sale despite the available evidence of their worthlessness. That those who sell them have not been prosecuted before now is due to the fact, we are informed, that the National Formulary, which is a legal standard under the law, contains a preparation of this kind—Elixir Digestivum Compositum. So long as the National Formulary recognizes this absurd and unscientific mixture, so long will the proprietary digestive impossibilities, such as Lactopeptine, continue to flourish.

In the past some pharmacists have been inclined to hold that, since some physicians still prescribe the humbug Elixir Lactopeptine, the imitation of it, Elixir Digestivum Compositum, should be kept in the National Formulary. This, however, is no warrant for the perpetuation of digestive humbugs. Certainly the American Pharmaceutical Association cannot expect the medical profession to recognize the National Formulary, neither should they expect its continuance as a legal standard, unless the formulas included in it are legitimate ones.

A brochure, "Digestive Impossibilities," just issued by the American Medical Association reminds us that in 1907 the Council on Pharmacy and Chemistry of the American Medical Association petitioned the American Pharmaceutical Association to omit from the edition the digestive impossibility "Elixir Digestivum Compositum." As the revision of the National Formulary is said to be practically completed, it is high time that the American Pharmaceutical Association announce its action on the petition of the Council on Pharmacy and Chemistry.

WAKING UP

The people of Charleston, the county seat of Mississippi County, received a severe jolt recently when the grand jury investigated the conditions of two of the county institutions, the jail and the poor farm, and found both in such wretchedly neglected condition as to call for the severest condemnation. The county jail was found to be wholly inadequate for its purposes; twenty-eight persons have been crowded into a small space in a building erected fifty years ago. That building must be a highly ornamental edifice after the lapse of half a century's neglect.

Conditions at the poor farm are even worse and the unfortunates compelled to spend their

last days in this place are indeed unfortunate. However, the citizens of Mississippi County are not the kind to shirk a responsibility when they know the remedy, and if they were so inclined the editor of their wide-awake county newspaper, the *Courier*, promises to give them no rest until the disgrace has been wiped out. This newspaper has undertaken to lead a campaign for improving conditions at both the jail and the poor farm, and publishes a long account of the deplorable conditions surrounding the inmates of the latter institution especially.

All success to the newspaper in this laudable endeavor, and to the citizens of that rich and prosperous community. This is a work in which the Mississippi County Medical Society should engage with a strong spirit of determination to teach the people that economy consists in spending money to establish healthful and disease-preventing conditions in these institutions.

The grand juries and the newspapers of many other counties might learn a lesson in higher economics and good citizenship from the experience of Mississippi County.

Dr. H. L. Reid's illuminating article on "Some Problems Confronting the Sanitarian," published in our September issue, will make good reading for those counties desiring to emulate Charleston's encouraging step forward.

WHAT'S THE MATTER WITH ILLINOIS?

The *Illinois Medical Journal* has come tumbling down the ladder of progress and joined the ranks of the obstructionists. The number of advertising pages have increased accordingly. But what will the 5,000 members, the large majority of whom, we are convinced, stand for the principle that the State Association and its publications shall uphold the standards of organized medicine, including the rules of the Council on Pharmacy and Chemistry governing advertisements, think of the backward step which their journal has forced them into?

Perhaps there is no more pitiable spectacle in the battle of life than lowering your standard and acknowledging defeat after exhausting all your resources in maintaining a principle. There is no disgrace attached to the conclusion of an issue honestly fought, but when a leader deliberately surrenders his people to the opposing forces while still well armed and eager for battle, he is guilty of a treasonable act and ought to be dealt with accordingly. The *Illinois Medical Journal* until very recently stood for the principles of our organization and its pages were free from objectionable advertisements. With the change in management (it has no editor) comes a disgraceful acknowledgment that it will accept and pub-

lish advertisements of articles irrespective of the findings of the Council on Pharmacy and Chemistry concerning the honesty and reliability of those articles. Will the Illinois State Medical Association permit its journal to be prostituted in this disgraceful manner after fighting for years to be consistent, respectable and ethical?

STICK TO THE COUNCIL ON PHARMACY AND CHEMISTRY

A number of editors of State Association journals met in Chicago November 11, at the call of Dr. C. D. Pence of the *Illinois Medical Journal*, for the purpose of discussing the advertising problem as affecting State Medical Associations. Some eight or nine editors were present and six or seven supernumeraries from Illinois. The purpose of the meeting seemed to be to establish an advertising bureau and adopt the old method of accepting advertisements which give a formula and conform to a set of rules to be established by the editors; the whole system to be less strict than the Council on Pharmacy and Chemistry. The Council was severely condemned and considerably misrepresented by the Illinois delegation, with Michigan running a close second. The other state editors present were Indiana, Kansas, Maine, Missouri, Pennsylvania, South Carolina and *Northwest Medicine*, representing the states of Washington, Utah and Idaho. All these editors vigorously supported the present method of accepting the rules of the Council as the only standard to govern advertisements in State Association journals and defended it against the misrepresentations that had been voiced. Some of the states mentioned above do not at present confine their advertising to Council approved articles, but they are expecting to do so and they vigorously opposed any action calculated to open the pages of organization journals to unapproved proprietaries.

The meeting resulted in some good, as it demonstrated conclusively that, with the exception of Illinois, no state wishes to return to the old, inadequate and insincere method of judging the eligibility of advertisements by any other standard than the rules of the Council on Pharmacy and Chemistry.

A committee consisting of Dr. A. E. Bulson of the Indiana journal, Dr. F. C. Warnshuis of the Michigan journal and Dr. E. J. Goodwin of the Missouri journal, called on the officers of the American Medical Association to inquire what action had been taken on the resolution introduced by Dr. Warnshuis of Michigan in the House of Delegates at Minneapolis to establish an advertising bureau and appropriate funds for its maintenance to assist the state journals in obtaining advertisements. This committee ascertained that the trustees had appropriated the necessary

funds, and President Witherspoon had appointed a committee to conduct the bureau. This committee consists of Mr. W. C. Braun, advertising manager of *The Journal of the American Medical Association*; Dr. G. H. Simmons, editor of *The Journal of the American Medical Association*, and Dr. E. J. Goodwin, editor of *THE JOURNAL* of the Missouri State Medical Association. This committee has taken the preliminary steps for placing a man in the field at once to solicit advertisements for the state journals. Needless to say, the Bureau will not be conducted for profit. At first it will be an expense to the A. M. A., but soon should be self-supporting.

NEWSPAPERS AND PUBLIC HEALTH

Continuing its campaign to make St. Louis the healthiest city, the *St. Louis Republic* has brought into cooperative activity several health-protecting agencies that were hitherto quite useless bodies; for instance, the State Pure Food and Drug Department and the health committees from various clubs and civic organizations. We do not deprecate the past efforts of these workers, but everyone knows that no lasting good has resulted from their scattered and disconnected attempts to further the cause of public health. The destruction of a few cases of rotten eggs, the kerosening of a few pounds of tainted meat, the slushing of street gutters with a few gallons of fatless and formaldehyded milk here and there, angers the dealers whose goods are destroyed without reforming them or others. Not until the *Republic* entered the campaign was it possible to arouse the people to a realization of the extent of the frauds practiced on them and of the filthiness of numerous restaurants, groceries and meat shops.

As a practical result of this campaign, a milk bill that will protect the people from fraud and deceit in their milk-supply has been introduced in the municipal assembly by the St. Louis Board of Health and undoubtedly will be passed, for it has the approval not only of the milk dealers but also of all persons who have been studying this problem. In the past all efforts of the Board of Health to obtain an adequate law governing the milk-supply have utterly failed. Many restaurants have cleaned up and grocers, butchers and bakers are learning that sanitary shops have a money value because the people are refusing to patronize the other kind. All this because one newspaper has begun a fight for the health of the people. If this campaign is sustained, and we have no doubt the *Republic* will continue its splendid work, St. Louis may easily become a model for other cities.

What newspaper will be the next to take up the battle for health?

WESTERN SURGICAL ASSOCIATION

On December 19 and 20 the Western Surgical Association meets at the Planters Hotel, St. Louis. This is a body of men representative of the best surgery done between the Great Lakes and the Pacific Slope. Usually the attendance consists of seventy-five men or thereabouts. The hall at the Planters Hotel, in which the meetings are to be held, has a seating capacity of 250, and the Missouri profession, especially the surgical contingent, will be welcome at all sessions. Privilege of the floor will be accorded anyone desiring to take part in the discussions. It is hoped that a large number of enthusiastic physicians will result from this informal, but cordial invitation. Suggestions or requests for information can be addressed to D. O. Cooper, Suite 400, Metropolitan Building, St. Louis, Mo.

JESSE S. MYER, M.D.: IN MEMORIAM

"He whom the gods love dies young, while he is in health, has his senses and his sound judgment." Never have the comforting words of Plautus been more appropriate than in the case of Jesse S. Myer, and never has what seems to our mortal senses sheer and unnecessarily cruel tragedy needed all the comfort that philosophy or religion can give. But now that the tragedy has happened and regrets are vain, one thing we can do is to recall the good accomplished in that short life and the lesson in character given by our dead friend. Many others can speak more fully and more accurately of the life and training of Dr. Myer than the writer. Much that became known to me in the last few months is of too intimate a nature to write about, but I may be permitted to mention some of the characteristics that impressed themselves on me in the short time I was privileged to know Jesse Myer. He was a notable example of the best kind of physician according to our present conceptions. With a solid education, he had the mental training that enabled him to assimilate all the information that could come from actual personal experience and from the published experiences of others, and so to see all the features in examples of disease that fell under his observation. His methods were exact and orderly, he utilized all the resources of modern medicine, and his records of cases were as full and accurate as those in the best organized hospitals. He gave all his patients all the time necessary for diagnosis and treatment, but wasted neither time nor manipulations nor useless medication. With strong professional feeling and a tender and generous heart, he gave his services freely to all who approached him, as many hundreds who knew him in hospital and dispensary can testify.

I have had the sad experience of seeing many brave souls in the last stages of illness, but I have

seen nothing finer than the long-continued and constant courage Dr. Myer displayed. Fully alive to all the possibilities of his disease, a disease (myelogenous leukemia) in which optimism and therapeutic enthusiasm leave the minimum room for hope of recovery, he chose and carried out a mode of life that gave most promise of help to his family and his patients, but one that excluded most of those outward evidences of sympathy that are so dear to all and that he would have appreciated to the full. It was also a life that required a soul of adamant, and not for an instant did he fail. "Dauntless the slughorn to his lips he set and blew." Following the most approved means of treatment, he at the same time kept up all his activity. Thanks to a good constitution, and the temperance and purity of his life, he was able for some time to reach and maintain a high degree of health and efficiency. A large amount of hospital and private practice, and the splendid "Life of William Beaumont" were the fruits of this period, a period in which most men would have given up their time to efforts for the alleviation of their own misery. No complaint ever came from his lips, no sign other than a recent pallor showed on his face, otherwise so expressive. When he spoke of his symptoms he was as detached as if he were talking of a supposititious case. Doubtless those who thought they deserved his confidence regret that he did not more widely share his troubles with them. Each one must decide for himself, however, on the basis of what he would do under like circumstances, but I feel sure that none will fail to recognize the courage, tenderness and unselfishness that Jesse Myer showed. One thing he feared, a prolonged period of uselessness, and this he was fortunately spared, working up to the very hour in which he yielded to urgent advice regarding the need of more intense efforts in treatment, and then with relatively short and rapidly ominous symptoms passed into the coma that soon went on to "the sleep that knows no waking." Let us hope that in those few days he had time to think with satisfaction of the conduct of his last months. He died like the happy warrior he was.

"Who is the happy warrior? Who is he
That every man in arms would wish to be?
It is the generous spirit, who, when brought
Among the tasks of real life bath wrought
Upon the plan that pleased his childish thought.
When high endeavors are an inward light
That makes the path before him always bright;
Who with a natural instinct to discern
What knowledge can perform, is diligent to learn:
Abides by this resolve, and stops not there,
But makes his normal being his prime care.
Who, doomed to go in company with pain,
And fear and bloodshed, miserable train,
Turns his necessity to glorious gain."

G. D.

OBITUARY

BENJAMIN C. JONES, M.D.

Dr. Benjamin C. Jones of Poplar Bluff, a graduate of the Missouri Medical College, 1867, and a member of the Butler County Medical Society and the Missouri State Medical Association, died at his home October 9, aged 77 years. He served as a captain of cavalry in the Confederate Army, was twice elected to the Missouri legislature, and framed and assisted in passing the drainage law of the state. He was largely instrumental in the establishment of the Confederate Soldiers' Home and was honored with several responsible state positions.

CHARLES EUGENE MICHEL, M.D.

Dr. C. E. Michel of St. Louis, a graduate of the Medical College of the State of South Carolina, 1857, died at his home in St. Louis, September 29, aged 80, from senility. He was a distinguished oculist, a teacher in the Missouri Medical College for many years, and the author of many brilliant papers. He was the first in the world to make use of the process of electrolysis, the first to use the present accepted method for the removal of pterygium, and among the first to remove the fear of cataract operation by keeping the patient in a darkened room for months, for he opened to the vision of the patient within a few days after operation a world hitherto hidden from sight. He was not a member of the organized medical society in St. Louis, but his life and his acts were supportive of all the ideals for which organized medicine stand.

JESSE S. MYER, M.D.

During the night of October 29 Dr. Jesse S. Myer died of leukemia. He was born in 1873 in Salisbury, Mo., where he passed his boyhood and got his primary education. In 1890 he entered the University of the State of Missouri, from which institution he graduated in 1893, with a bachelor of arts degree. The same year he started his medical course at Marion Sims College of Medicine, securing his doctorate in medicine in 1896. After two years of postgraduate work in Europe he returned to St. Louis to take up the practice of medicine.

His career as a practitioner was marked from the outset by a tenacity and purity of purpose that served to give color and tone not only to our local profession but also to the specialty of internal medicine of our country. Young and vigorous as he was, he never knew the need of lying fallow; so from the very outset of his career he devoted his unusual energies to teaching, treating and investigating disease. And by one of the caprices of fate, he was carried off by a disease

that he had, in a measure, constituted as a special field in his own studies.

The catholicity of his medical mind is evidenced by the broad field covered by him in his contributions to medical literature. His last large work, characterized by Sir William Osler as a "labor of love," was the classic "Life and Letters of Doctor William Beaumont," published last June. Into this volume he put energy so colossal as to be infectious to those who enjoyed the privilege of sharing the pleasure of his work with him.

The latter part of his life typifies the man, and makes his memory a heritage. Conscious of his ailment, and fully alive to every detail of its inevitable course, he continued his work, not in a spirit of resignation, but rather with a zest born of the determination that neither his friends nor his immediate family should know his plight, till physical incapacity forced the admission of it.

M. G. S.

(From *Bulletin* St. Louis Medical Society.)

NEWS NOTES

DR. WM. G. ATWOOD, Carrollton, has been appointed coroner of Carroll County to fill the unexpired term of Dr. C. B. Lawrence.

DRS. ROBERT E. SCHLUETER and GEORGE DOCK, St. Louis, have been elected members of the Société Française d'Histoire de la Médecine.

A BILL has been introduced in the St. Louis Municipal Assembly to control the supply of milk. The principal feature of this bill is pasteurization at low temperature. The bill has the support of milk dealers and will doubtless pass.

A HOME for the nurses of the Barnard Free Skin and Cancer Hospital, St. Louis, has been presented to the Hospital by Mrs. George D. Barnard. The home is a three-story building, containing fifteen rooms, and will be known as the Mrs. George D. Barnard Home for Nurses.

GREENE COUNTY MEDICAL SOCIETY and the Springfield District Nurses' Association have begun a movement for the erection of a county hospital for tuberculosis patients. Lectures, motion pictures, exhibits and other means of interesting the people in the project will be features of the campaign.

THE Southwest Missouri Medical Association held its annual meeting at Springfield, November 6 and 7, with about two hundred physicians present. The occurrence of over hundred cases of diphtheria in Springfield caused the local profession to take advantage of the presence of the visiting doctors to assist them in the investigation of the conditions responsible for such an epidemic.

DR. D. L. HARRIS, for seven years city bacteriologist of St. Louis, has resigned. During his service in the city bacteriologic department he made several notable improvements in the treatment of rabies. He has been appointed professor of hygiene and preventive medicine in the Medical Department of St. Louis University. Dr. F. A. Baldwin has been appointed city bacteriologist to succeed Dr. Harris.

TYPHOID FEVER has been epidemic in Sedalia for several weeks; over one hundred and fifty cases were reported recently. On the theory that the milk-supply was responsible for the numerous cases, the state veterinarian was asked to test the dairy cows. It is said cows have been pastured near an open sewer on the outskirts of the city. Sedalia has no system of disposing of its sewage other than allowing it to drain on open land just outside of the city. Perhaps a sewer system will be built in Sedalia some time, but many valuable lives doubtless will be sacrificed before the people wake up to the necessity.

SINCE October 1 the following articles have been accepted for inclusion with New and Non-official Remedies:

Strepto-Bacterin (Scarlatina Bacterin), Anti-streptococcic Vaccine (Scarlatina Prophylactic) (Abbott Alkaloidal Co.).

Tannigen Tablets, 8 grains (The Bayer Company, Inc.).

Silk Peptone "Hoechst" (Farbwerke-Hoechst Co.).

At the request of the manufacturer the Council has voted to reconsider the acceptance of and to omit the following from New and Nonofficial Remedies:

Alypin Tablets, $3\frac{1}{3}$ grains; Alypin Tablets, $1\frac{1}{8}$ grains; Alypin Tablets, $\frac{3}{4}$ grain; Citarin Tablets, 15 grains (The Bayer Company, Inc.).

In view of the report of untoward effects from Hormonal and the claim of the manufacturer that the product now on the market differs from that described in New and Nonofficial Remedies, the Council has rescinded the acceptance of:

Hormonal (Hömonal Intramuscular and Hormonal Intravenous) Schering & Glatz.

THE fourteenth annual meeting of the Missouri State Conference of Charities and Corrections convenes at St. Joseph, November 14, 15 and 16. The program follows:

FRIDAY, NOVEMBER 14

Address of Welcome—C. D. Morris, President of the Commerce Club, St. Joseph.

Response for the Conference—Roger N. Baldwin, President.

What Is Being Done and What Should Be Done for the Welfare of Children Throughout the State—Program in charge of Dr. George B. Mangold, Chairman Children's Committee.

Delinquent Parents—Dr. E. L. Mathias, Chief Probation Officer Kansas City Juvenile Court. Discussion.

First Steps in a Public Placing-Out System—Alfred Fairbank, Agent St. Louis Board of Children's Guardians. Discussion.

The Needs of Missouri's Penal and Reformatory System. Program in charge of Rev. J. N. Crutcher of the State Board of Charities.

The New State Board of Pardons and Paroles.

The Need of a State Reformatory for First and Young Offenders.

The Needs of Our State Institutions.—Program in charge of Dr. M. A. Bliss, Chairman of the Committee on Institutions.

The New Functions and Responsibilities of the State Board of Charities—James F. Conran, member. Discussion.

Field Work in the State Hospital Service—Dr. M. A. Bliss, St. Louis.

Mothers' Pensions—Mrs. Edith M. Cruise of the Board of Public Welfare, Kansas City. Discussion.

Family Desertion—Oscar Leonard, Superintendent of the United Jewish Educational and Charitable Associations of St. Louis. Discussion.

Following the regular session there will be a short meeting for those interested in the social problems among colored people in the state.

Program in charge of J. D. Elliff, Chairman of the Committee on Social Centers.

The Present Status and Needs of the Social Center Movement in Rural Missouri—J. D. Elliff, Professor of High School Administration, University of Missouri.

Discussion led by Prof. James A. Robeson, Superintendent of Schools, Clay County.

The Church and Social Service, a Committee Report on the Work and Needs in Missouri—Prof. Alva W. Taylor, of the Bible College of Missouri, Columbia.

SATURDAY, NOVEMBER 15

Housing in Relation to Public Health—Walter C. Root, architect, Kansas City.

Boarding Houses and the Public Health—Mrs. Nan W. Sperry, Kansas City.

District Tuberculosis Hospitals—Dr. Daniel Morton, St. Joseph.

Preparing for Social Legislation in 1915—Jacob Billikopf, Chairman of the Committee on Social Legislation.

Industrial Betterment in Missouri—In charge of Hon. Frank P. Walsh, Chairman of the Federal Commission on Industrial Relations.

The Minimum Wage—By a member of the Senate Investigating Committee.

Workmen's Compensation—By a member of the Senate Investigating Committee.

State-Wide Factory Inspection—Discussion led by R. T. Woods, President of the State Federation of Labor.

SUNDAY, NOVEMBER 16

Conference delegates will deliver addresses in local churches.

The Federation of Women's Clubs—Mrs. W. R. Chivvis, President.

The State Federation of Labor—R. T. Wood, President.

The Commercial Organizations of the State.

The Relation of These Organized Forces to the Problems Under Jurisdiction of the State Board of Charities—Wm. T. Cross, former Secretary of the State Board.

Address by Governor Elliott W. Major.

CORRESPONDENCE

ST. LOUIS, Oct. 31, 1913.

E. J. Goodwin, M.D., Editor JOURNAL Missouri Medical Association.

Dear Sir:—I wish to thank you for the marked copy of the *Times*, London, of August 8 last, containing abstract of a paper read before the Medical History Section of the International Medical Congress by Miss F. M. Stawell, entitled "St. Luke and Virgil," the contention being that Luke was Roman rather than Greek.

Your marginal query "How about it?" raises points that have troubled scholars for centuries and I am by no means able to solve the problem, although I have for a number of years given some of my time to a study of the medical side of Luke, the findings and conclusions reached being put in the form of a yearly paper dealing with different aspects of his character and work so far as they appear.

Several of these papers were read before the St. Louis Medical History Club, but only the first one has been published. All but the last one of the series, six in number, have been submitted for criticism to Dr. Kenneth W. Millican, now of the editorial staff of the *Lancet*, Sir William Osler and a few other authorities and friends at home and abroad.

These papers under the general heading of "Luke, the Greek Physician," are in their order as follows:

Part 2.—"A Study of the Effect of Contact Between Greek Science and Christian Faith in a Human Mind."

Part 3 and 4.—"His Place in Medicine, with Remarks on Faith-Healing, Reputed Medical Miracles and Like Phenomena."

Part 5.—"The Galilean Prophet, the Greek Physician."

Part 6.—"The Brain in Relation to Medical Science and Pious Faith."

Should you desire them for publication they will be placed at your disposal.

Inasmuch as in long-past ages medical science was fortunately differentiated from sacerdotal churchism and has independently developed its beneficence to mankind it would seem to be entirely appropriate for our profession to take concerted steps to deliver Luke from the ecclesiastical influences that have dimmed his scientific character and place his medical memory where it belongs, for undoubtedly his was the most cosmopolitan intelligence of any of those who shared in the beginnings of what is called Christianity.

GEORGE HOMAN, M.D.

[The papers will be published in THE JOURNAL.—Ed.]

MISCELLANY

ABOUT DUES

The following letter has been sent to secretaries of the county medical societies for their instruction concerning the collection of dues for 1914:

All members should be interested in the success and progress of their respective county societies, but no organization can make itself felt as an influential body unless its members discharge their obligation to the Society. The first duty a member owes his society is the payment of the annual assessment; the prompt discharge of this obligation is an indication to all the other members that his interest is alive and he is ready to perform other duties. Furthermore, the prompt payment of dues is essential to the enjoyment of privileges and benefits of membership.

The letter follows:

TO COUNTY SOCIETY SECRETARIES

ST. LOUIS, Nov. 4, 1913.

Dear Doctor:—Herewith I hand you the roster of your society as officially represented on my records for 1913. If there are any errors please inform me at once, giving correct data so I can make the change.

For every member in good standing you will remit to me \$3 for the 1914 assessment. For those who are delinquent you must remit \$2 for each of the past years and \$3 for 1914, in order to place them in good standing.

Under separate cover I have sent you bills for the dues. These you can send to your members at once and urge them to pay promptly. These bills also contain a space for receipting the member when he pays.

I sincerely trust you will make a strong effort to induce every member to pay promptly. Delay in paying dues tends to cause members to relax their interest in society work, but a little prodding by the secretary will generally bring out the slow ones.

I am glad to say the association is growing in strength and influence and in usefulness to the members, and they are showing more interest in the progress of the association than in former years. There is a very general feeling that membership in the county, state and national associations is a desirable and beneficial privilege, therefore members are viewing their obligations to the organization with more seriousness than in former years; hence, there are fewer delinquents now than there were last year at this time.

I believe we should feel encouraged for I think the members will pay promptly and I hope you will have no difficulty in collecting dues.

I want to thank you for your activity and cooperation in the past and I hope you will feel free to call upon me at all times for any assistance that I can render.

Very sincerely yours,

E. J. GOODWIN,

Secretary-Editor.

MISSOURI STATE BOARD OF HEALTH

DIPHThERIA ANTITOXIN

Recognizing the value of diphtheria antitoxin as a prophylactic and curative agent, it is the desire of the Missouri State Board of Health that the antitoxin shall be readily available to the indigent people of the state at all times.

To secure for each of the local boards of health and county courts the advantage of the best quantity prices, we have consummated an arrangement with the H. K. Mulford Company, Philadelphia, Pa., for the distribution of their product. The Mulford Diphtheria Antitoxin is a purified and concentrated product prepared in accordance with the most improved methods. Every dose is supplied in a perfected aseptic glass syringe, ready for immediate use.

The antitoxin will be available at the following special prices to the local boards of health and county courts:

1,000 units.....	\$.50
3,000 units.....	1.35
5,000 units.....	2.00
7,500 units.....	3.00
10,000 units.....	4.00

The distribution will be handled through the druggists. No special distributing stations will be appointed, and the regular "concentrated and purified" grade of the Mulford Antitoxin will be furnished.

INSTRUCTIONS FOR OBTAINING ANTITOXIN

Blank requisition forms will be furnished to all druggists at this time, and additional supplies may be obtained by application to the office of the State Board of Health, or to H. K. Mulford Company, Philadelphia.

These forms have spaces for inserting the name of the patient, physician and local health officer, or other authorized official. When thus filled in and signed, the requisition becomes valid and the druggist is thereby authorized to furnish from his regular stock such quantities of antitoxin as may be specified thereon.

On this signed requisition being sent by the druggist to H. K. Mulford Company, Philadelphia, an adjustment is made with the druggist accordingly, and the antitoxin is charged to the account of the local board of health or county court as may be indicated on the order.

MISSOURI STATE BOARD OF HEALTH.

J. A. B. Adcock, M.D., Secretary.

FORM OF ORDER FOR DIPHTHERIA ANTITOXIN DISTRIBUTED UNDER THE DIRECTION OF THE MISSOURI STATE BOARD OF HEALTH

Note to the Physician.—This order for Diphtheria Antitoxin (Mulford) is to be presented to the druggist. It is valid only when filled in with the name and address of party for whom Antitoxin is to be employed, also signed with the name and address of the attending physician and by the local health officer or other authorized agent.

The druggist will please deliver to

Name of Patient.....
Street Address.....
(When in country give County and Township)
City or Town.....Missouri

..Syringes M'f'd Diph. Antitoxin	1,000 units @ \$.50
..Syringes M'f'd Diph. Antitoxin	3,000 units @ 1.35
..Syringes M'f'd Diph. Antitoxin	5,000 units @ 2.00
..Syringes M'f'd Diph. Antitoxin	7,500 units @ 3.00
..Syringes M'f'd Diph. Antitoxin	10,000 units @ 4.00

This is to certify that the Diphtheria Antitoxin ordered above is for an indigent case, and is to be used by me in the treatment or prevention of Diphtheria for the person whose name is inserted in this order. I also agree to make no charge for this Antitoxin.

Signed by (Attending Physician)
 Street Address
 (When in country give County and Township)
 City or Town.....Missouri
 Date.....

(The physician is to fill in above order, secure proper indorsement, and present same to the druggist.)

INDORSEMENT OF PROPER AUTHORITY

I hereby authorize the use of the above material for the treatment of the patient named, who is in indigent circumstances. The goods are to be charged to

(Fill in here name of Board of Health or County Court to whom Antitoxin is to be charged.)

(Signed
 (Local Health Officer, County Physician, or authorized agent.)

Official Position
 Date Address

Note to the Druggist.—The above order for Antitoxin is to be honored and filled only if it is completely filled in, signed, and indorsed as indicated. When thus presented in proper form you are authorized to furnish from your regular stock such quantities of Antitoxin as may be specified.

Insist that the name of the account to which the Antitoxin is to be charged is correctly filled in, because the druggist is naturally held responsible for the Antitoxin until the account is accepted by the local board of health or county court.

The H. K. Mulford Company, Philadelphia, upon receipt of this order in proper form, and *with your name and address*, will send you transportation charges prepaid, a like amount of Antitoxin to replace the quantity given out on this board of health order, and also send you a credit memorandum of ten per cent. (10%) of the board of health prices, as handling charges and to reimburse you for your trouble in aiding the health authorities in the distribution.

H. K. MULFORD COMPANY,

Philadelphia.

Name Druggist
 Street Address
 City or Town.....Missouri

TWELFTH INTERNATIONAL MEDICAL CONGRESS

The congress met each day in general session at Albert Hall and was addressed in turn by Professor Chaufford, Professor Cushing, Professor Ehrlich, Professor Bateson and the Hon. John Burns.

There were twenty-three sections each dealing with a special branch. Most of them met in the South Kensington district in the neighborhood of Albert Hall, but even with the large number of halls and lecture-rooms available in the buildings of the Imperial College and the University of London, it was necessary to locate some of the sections in other parts of the city.

The Sections of Medicine and Diseases of Children met at the hall of the Medical Society

of London in Cavendish Square. It is a very complete building, equipped with an elevator and all modern conveniences and containing, besides the two large halls in which the sections met, a number of rooms adapted for scientific and social purposes. When one sees the equipment of the London society, acquired slowly through the years of its existence, he looks forward hopefully to the time when his own society may have equally handsome quarters.

With the various sections meeting at the same time and more or less widely separated, it was impossible to gather any impressions of the congress as a whole. Forty-five papers were presented in the Section of Neuropathology and even a greater number in some other sections. Twenty-three times forty-five amounts to more than a thousand. This gives some idea not only of the wide field covered by the activities of the members, but of the great amount of work on the part of those who had the program and preparations for the meeting in hand. Nearly 8,000 registered, so about one in eight presented a paper.

Our English cousins welcomed the members of all nationalities and provided most handsomely for the social diversions possible to be sandwiched in between scientific meetings. There were dinners, receptions, teas, lawn parties, excursions, drives, boat parties and theater entertainments in such number that no one could have lacked opportunity to see something of English social life. Besides this, many local men filled their houses with their visiting friends and in royal style made them generally at home.

Perhaps no city in the world has more traffic to care for or handles it more cleverly than London. There are very few surface car lines, but the underground system is very extensive and gives excellent service. The motor omnibuses replace surface lines. They are gasoline, two-story, open-top affairs carrying about twenty people. If one will take pains to follow out the numbers on a road map of London he will find it possible to go almost anywhere swiftly and comfortably. Cab service is cheap and excellent.

At the closing meeting we had an opportunity to watch the tactics of that group of English subjects over which John Bull scratches his head, bearing meanwhile a puzzled look.

We had noted all during the week a number of suffragette enthusiasts bearing posters reading, "The Government is Murdering the Women," and other cheerful statements of like import, marching around Albert Hall. When the Hon. John Burns, who just at present is chairman of the National Health Board, was addressing the closing meeting there suddenly arose a commotion at one side of the hall, and a suffragette arose, shaking her finger at Burns and screaming denunciations of his policies at the top of her voice. She was rather promptly dragged out by

the police. Quiet had scarcely been restored when another suffragette arose to voice her sentiments. When she had been squelched and led out still another began, until six or seven had to be disposed of. Mr. Burns was the least disturbed person in the hall and continued his address which was a most excellent one, in an even voice.

We Americans were represented before the general congress by Dr. Harvey Cushing and have every reason to be proud of the address he delivered. It was the address on surgery but dealt with the larger and wider aspects of surgical and medical science in a masterful way. No address before the congress was so widely and favorably commented on by the London papers, which, by the way, followed the proceedings closely and featured faithfully not only the general aspects but those of a more technical kind.

The members left London not only fully repaid in a scientific sense but with an extremely kind recollection of how well they had been treated. The congress selected Munich as the next meeting place, four years hence. M. A. B.

DRUGGISTS ARRAIGN PATENT MEDICINES

In this issue we present a report of a discussion which took place at the meeting of the Kansas City Association of Retail Druggists October 14.

This report makes interesting reading for physicians. Its arraignment of some popular patent medicines is so much to the point that we print it in full. To many this information is an old story, to others the details may be new. But physicians cannot have too much of this exact knowledge at their finger ends. The druggist even accuse some physicians of prescribing sanatogen, and to add insult to injury say that some have put on the prescription the price which should be paid. The charge may be true that physicians have made some patent medicines popular.

The discussion by the druggists follows:

MEETING KANSAS CITY ASSOCIATION RETAIL DRUGGISTS, COATES HOUSE, OCT. 14, 1913

From announcements at this meeting, the sale of patent medicines at or below cost as leaders in department houses and down-town drug stores will soon be a thing of the past in Kansas City. A. N. Doerschuk, president of the association, says that the call for patent medicines has greatly fallen off since reputable newspapers will no longer take the advertisements of these nostrums, and the sale of these goods at or below cost is no longer, as in years gone by, the ballyhoo that brings the populace swarming to the counters.

Managers have learned that the public is educated past the continual use of patent medicine, and by tacit agreement down-town drug stores and department houses will discontinue "cutting" patents as leaders.

The following subjects were also discussed:

THE SANATOGEN CLAIMS

Sanatogen is claimed, by its promoters, to be composed of 5 per cent. of sodium glycerophosphate and 95 per cent. of casein. Granting this claim to be correct, it cannot have any other therapeutic properties than those inherent in its ingredients. Now the glycerophosphate must be the "tonic" part of their "food tonic" combination. That it is of very little therapeutic value may be gathered from the following:

Sollmann says: "The large quantity of phosphorus in the nerve tissue has led to persistent attempts to use phosphorus and its salts as 'nerve foods' or tonics in neurasthenia, serofula, neuritis, incipient phthisis, etc. Phosphorus, phosphates, hypophosphates and more recently glycerophosphates have been tried for this purpose. Metabolism experiments have been uniformly negative, and the clinical reports are so contradictory that these compounds must be devoid of any action. There is no evidence that inorganic phosphorus compounds are ever transformed into lecithin. They are all excreted as phosphates."

Cushny says: "The phosphates have been supposed to be of benefit in nervous diseases, on the theory that these were due to the insufficiency of phosphorus in the brain, and glycerophosphates have been introduced for the same reason, but both in theory and practice have proved to be erroneous, for the animal organism is unable to build up proteid combinations from their inorganic constituents, and the same when ingested are found unchanged in the excreta."

SANATOGEN AS A FOOD

As food, its value must be judged, in first place, by the amount of caloric energy that it is capable of yielding to the system. Now \$1 worth (220 grams) of Sanatogen is claimed to contain 116 grams of proteid, which would yield 475 calories (1 gm. of proteid equal 4.1 cal.). Comparing this with figures taken from U. S. Department of Agriculture figures we find:

\$1 worth of Sanatogen yields....	475 calories
\$1 worth of milk yields.....	8,850 calories
\$1 worth of cheese yields.....	11,850 calories
\$1 worth of wheat flour yields...	54,400 calories

It would require over \$100 worth of Sanatogen to give the same energy as \$1 worth of ordinary wheat flour.

Hence a neurasthenic who is poor and who permits himself to be persuaded by the seductive advertisements of the Sanatogen promoters to in-

vest his money in Sanatogen, when he needs it to buy bread and milk, is not only wasting his money, but actually lessening his chances to improve, because this disease needs, above all things, rest and abundance of food; and both cost money.

ADVERTISING CRITICISED

The eminent medical authorities on whose testimonials the Sanatogen people lay so much stress would indignantly repudiate their efforts to foist this material indiscriminately on sufferers from nervous diseases by means of newspaper advertisements with the claim that it brings "New Life for Nervous Sufferers."

SARGOL

The chemists of the British Medical Association have analyzed the much-advertised sargol; and their analysis showed the preparation to contain lecithin, sodium hypophosphate, potassium hypophosphite, calcium hypophosphite, zinc phosphide, albumin (coagulated albumen), sugar and tale. The estimated cost of the ingredients in a \$1 package was 2½ cents.

"NERVE SICKNESS"

General medical opinion has been under the impression that a breakdown of the nerves, nervous prostration, neurasthenia or weak nerves, neuritis, and the like are true diseases of the nerves.

A discovery has just been made independently and at the same time by several European scientists and by Leonard Keene Hirshbery, A.B., M.A., M.D. (Johns Hopkins University), to the effect that the prostrating ailments and the many other so-called troubles of the nerves are in no way due to diseases of those fibers. Indeed, if the brain and its wires are examined by every known method and scientific instrument, they will be found perfectly well and unharmed in all persons thus afflicted.

Now the new discovery has gone much beyond the mere finding of healthy nerves in all of these illnesses. Indeed, it is the positive revelation that in all these cases the nerves are sound and it is the muscles that are sick, and this has flabbergasted the present-day authorities. What has gone for the past generation as "neurasthenia" and other forms of nervous collapse are actually and truly affections of the muscles.

What really happens when a nerve shrivels up or is otherwise hurt is that the muscles near by or the muscles at the end of the motor nerves become flabby or rigid, weak or fatty, overstiff or beyond the control and guidance of your will.

Muscle maladies must therefore be the names henceforth of all of these mis-called "nervous" inflammations, and most cases of weak nerves or "neurasthenia" mean overfed, flabby, weak and neglected muscles. Hence the one is to renew and rejuvenate those necessary tissues.

FREE MURINE

Murine, the advertised eye water, is now "supplied free to any barber-supply house who desires in turn to include it complimentary to their country customers, according to an advertisement of the company making Murine, in a barber-supply journal. This ought to help (?) the sale of Murine in drug stores, that is, if druggists still handle it after all that has appeared in the popular journal and from government sources concerning the fakes and frauds among proprietary medicines.—*Bulletin*, Jackson County Medical Society.

SOCIETY PROCEEDINGS

THE SOUTHEAST MISSOURI MEDICAL ASSOCIATION

The Southeast Missouri Medical Association met in Billiken Hall, Charleston, Mo., October 14, 15 and 16.

The meeting was called to order by the president; invocation by Rev. Shaw; address of welcome by Mayor Joslyn. Response by Dr. W. F. S. Taylor of Poplar Bluff. President Anthony of Fredericktown read the president's annual address, after which the association listened to the reading of the minutes of the preceding meeting, which were approved.

Committees were appointed by the chair and the society adjourned till 8:30 a. m. Wednesday.

WEDNESDAY, OCTOBER 15

A paper was read by Dr. Howell of Charleston on "Some Questions and Answers." Dr. Howell thought the modern doctor was losing prestige with the people and cited the alarming increase of all sorts of doctors other than real ones. His paper was warmly discussed.

Dr. W. K. Statler of Oakridge read a paper on "Vincent's Angina," and presented a microscopic demonstration of the *causus morbi*. Dr. Statler made the diagnosis by the microscopic findings. The doctor was commended on his diligence in seeking diagnosis in this case.

Dr. F. S. Vernon of Charleston presented a boy whom he had treated for a compound dislocation of the knee. The boy has almost perfect function of the joint, which the society considered of a rare occurrence in this class of injury.

Dr. G. W. Vinyard of Jackson read a paper on the "Gypsum Stirrup" in the treatment of fractures of the leg, demonstrating with a stirrup that he had used successfully. Dr. Vinyard says you cannot go wrong when you put them up in a gypsum stirrup.

Dr. A. A. Bondurant of Cairo read a paper on "Operations on Pelvic Viscera," in which he made a study of the effects on the nervous system of his patients. Dr. Bondurant thinks the internal secretions of some organs usually removed in toto are necessary to the equilibrium of the nervous system.

Dr. T. Roy Frazer of Commerce read a paper on "Pituitrin in Labor" and thought he had marvelous results in hastening labor.

Dr. Hutton of Farnfeldt read a paper on "Manic Depressive Insanity," in which he advocated the institution of immediate treatment of the manic depressive of posterity by vasectomy and fallopian occlusion. He also expressed the hope that the discovery of the toxic principle causing the symptoms and the administration of its antitoxin would some day render these operations unnecessary.

Dr. C. E. Walters of Dexter presented the histories of some cases of pain in the abdomen. The cases were cirrhosis of liver, the ordinary treatment of which failed to alleviate. Owing to the extreme advancement of this case the members thought best to continue the whisky.

The Mississippi County Medical Society entertained the society with an auto ride and a smoker.

After an unsuccessful attempt to change the by-laws, making the meetings annual instead of semi-annual, the society adjourned to meet at Oran in May, 1914.

W. S. HUTTON, M.D., President.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI ST. LOUIS

The Medical Society of City Hospital Alumni held its regular meeting Thursday, November 6, in the parlors of the St. Louis Medical Society. The program follows:

"Demonstration of Two Patients and Blood Specimens: a. Lymphatic Leukemia; b. Malignancy with Enlarged Glands and Blood Picture Resembling Leukemia," by Dr. Ralph A. Kinsella.

"Description of Fatal Case of Premature Separation of the Placenta," by Dr. Wm. H. Vogt.

"Diseases of the Verumontanum," by Dr. Leo Bartels.

ST. LOUIS MEDICAL SOCIETY

PROGRAMS

SATURDAY, NOVEMBER 8

1. Report of special committee on "Poliomyelitis."
2. "The Wassermann Serum Reaction and Its Value to Diagnostic and Therapeutic Neurology,"..... Dr. Wm. Elder
3. "Incrustations of the Renal Pelvis and Ureter"..... Dr. John R. Caulk

SATURDAY, NOVEMBER 15

"Psychological Factors in Medical Practice." (By invitation) Dr. Shepherd Ivory Franz, Washington, D. C.

SATURDAY, NOVEMBER 22

Program supplied by Ophthalmic section.

SYMPOSIUM ON SYPHILIS OF THE EYE

- "Parenchymous Keratitis"..... Dr. Adolph Alt
- "A Case of Papillary Iritis Following an Injection of Salvarsan"..... Dr. Clarence Loeb
- "Salvarsan and the Eye"..... Dr. John Green, Jr.
- "Choroidal Gumma"..... Dr. W. H. Luedde
- "Some Ocular Signs of Syphilis of Nervous Symptoms"..... Dr. Meyer Wiener
- "Paralysis of Ocular Muscles"..... Dr. J. F. Shoemaker
- "Therapeutics of Ocular Syphilis"..... Dr. W. F. Hardy

SATURDAY, NOVEMBER 29

Program supplied by Obstetric section.

SATURDAY, DECEMBER 6

"The Mechanical Elements Concerned in Gastro-intestinal Stasis." (By invitation) Dr. R. C. Coffey, Portland, Ore.

All meetings are held in the society's building, 3525 Pine street. Visiting physicians are cordially invited to attend.

ATCHISON COUNTY MEDICAL SOCIETY

The Atchison County Medical Society met in regular session at Tarkio, October 14. Present: Drs. James A. Hunter, president; Chas. E. Benham, vice-president; Austin McMichael, secretary-treasurer; Drs. O. M. C. Chamberlain, Geo. W. McBride, J. A. Postlewait, C. M. Waugh, E. P. Taylor.

An interesting and instructive paper was read by Dr. Benham on the subject of "Typhoid Fever." He laid special emphasis on feeding and the food of choice was milk given in large quantities, as much as six quarts in twenty-four hours. In the discussion some of the members thought the amount of milk advised by the essayist was not always best.

The subject for general discussion was "Erysipelas." This was considered in various phases by the members.

The following officers were elected for the ensuing year: president, Dr. Charles E. Benham; vice-president, Dr. O. M. C. Chamberlain; secretary-treasurer, Dr. Austin McMichael; delegate, Dr. James A. Hunter; alternate, Dr. Charles T. Settle.

The next meeting will be held at Rockport, Jan. 6, 1914.

AUSTIN MCMICHAEL, M.D., Secretary.

BENTON COUNTY MEDICAL SOCIETY

The regular meeting of the Benton County Medical Society was held in Dr. Dillon's office in Warsaw. Dr. J. P. Van Allen, president, in the chair. The meeting was called to order at 10:30 a. m. and the minutes of the last meeting were read and approved. Letters were read from the secretary of the state association referring to the election of officers and the collection of dues for 1914. It was decided to hold the last meeting of the year on Thursday, November 13, at Warsaw, at 2 p. m., and in the evening to hold a public meeting in the court-house, when addresses will be delivered by several members of the state association on health protection and sanitation. The secretary was instructed to enlist the assistance of the state association and our counselor in behalf of our society and the public.

The president, Dr. J. P. Van Allen, presented a paper on "Beck's Bismuth Paste in Chronic Suppuration," describing the benefits from this mode of treatment and giving his experiences in its use. He cautioned against toxic effects and how to meet them. The paper was very interesting and instructive and a hearty discussion was entered into by those having had experience in this method of treatment, and they generally indorsed the course as given by Dr. Van Allen.

At the November meeting papers will be read by Drs. Jones, Sands and Logan, the titles to be furnished later.

Those present were: Dr. J. P. Van Allen, Cole Camp; Dr. E. L. Rhodes, Lincoln; Dr. J. A. Logan, Fairfield; Dr. E. H. Gist, Fristoe; Drs. Haynes, Savage, Sands, Dillon, Pomeroy and Smith of Warsaw.

J. R. SMITH, M.D., Secretary.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society held its regular monthly meeting October 9 in the Palace Hotel at Fulton. Present: Drs. Crews, Christian, Owen, McCall, Young and Yates of Fulton; Drs. Nichols and Williamson of Mokane; Drs. Evans, Major and Knight of the staff of State Hospital No. 1, and by invitation, Drs. Woodson Moss of Columbia and J. G. Moore of Mexico.

Dr. Moss read a very interesting and scientific paper on "Status Lymphaticus," with report of a case, and elucidated many interesting and valuable points in this condition. The paper was very much enjoyed and freely discussed by the members.

After dinner at the hotel, Dr. Moore read a very instructive paper on "Ectopic Gestation" and reported a case, with presentation of the specimen. This very valuable paper brought out a wide discussion in which all members took part. Our thanks are due Drs. Moss and Moore for adding to much of scientific value to our meeting.

Dr. McCall of Fulton read a most interesting paper on "Lacerations of the Cervix." A general discussion followed the reading.

Dr. Young of Fulton read a timely and practical paper on "Scarlet Fever," which was also freely discussed.

The fraternal spirit was very pronounced and the social features most enjoyable.

An invitation to hold the November meeting at State Hospital No. 1 was accepted.

MARTIN YATES, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, October 9. The following members were present: Dr. B. B. Tout, president; Dr. H. S. Crawford, secretary; Drs. T. W. Adair, H. A. Brierly, C. J. Dodd, A. R. Elder, S. W. Fair, H. Jerard, M. P. Overholser and J. S. Triplett. Dr. Robinson of Nevada, ex-superintendent Hospital No. 3, was present and took part in the discussion.

Dr. Flavil B. Tiffany of the Jackson County Medical Society was present and read a paper on "Ophthalmology in the Orient." This was a very interesting and instructive paper and Dr. Tiffany was tendered a vote of thanks by the society for his kindness.

Dr. M. P. Overholser read a paper on "Blood Pressure" which was very instructive and was generally discussed. Special features were discussed as follows: blood pressure in nephritis, by Dr. J. S. Triplett; blood pressure in pneumonia, by Dr. H. S. Crawford; blood pressure in tuberculosis, by Dr. H. Jerard.

At the August meeting Dr. J. S. Triplett was elected to read a paper on "Preventive Medicine" before a meeting of the county school directors, August 28. This paper was read as instructed. At this meeting of school boards, bulletins on the house-fly nuisance, gotten up by the Cass County Medical Society, were distributed to each district to be posted in the school-houses.

H. S. CRAWFORD, M.D., Secretary.

THE DAVIESS COUNTY MEDICAL SOCIETY

The Davies County Medical Society met at Jameson, Thursday evening, October 14, with the following members present: Drs. R. D. Dunham, Frank Hedges, Anna Henry McClung, W. L. Brosius, M. A. Smith, D. F. Hama, F. V. Frazier, R. V. Thompson, O. F. Clagett, E. D. Wagoner and N. M. Wetzel. The visiting doctors were J. C. Guinn of Jameson and Nigh of Pattonsburg.

Mrs. Wetzel served the doctors with supper, after which the meeting was called to order by President N. M. Wetzel and minutes read of previous meetings by Secretary M. A. Smith. Dr. Wetzel then presented a very interesting clinic which was thoroughly examined by all the doctors present and a lively discussion followed. Many interesting and scientific points in diagnosis were brought out which stimulated the doctors and made them feel the great importance of having clinics present at the regular meetings.

Dr. R. V. Thompson presented the subject of "Acute Anterior Poliomyelitis" in a very interesting and instructive manner, reporting a case along with the presentation of the subject, giving symptoms, treatment and results, after which every one present joined in a lively discussion. The members seem more determined than ever to make the county society one of the best in the state. They realize more and more the great good that is accomplished by meeting in a body

for scientific study of diseases, their diagnosis and treatment. Every doctor in the county who does not attend these meetings misses a great opportunity and robs his clientele of knowledge and service which they are entitled to.

The next regular meeting will be held at Jamesport, December 9. A very interesting program has been arranged. As special numbers Dr. McConkey, counselor of the Twelfth District, will deliver an address that every member of the society should hear. It has also been arranged for Dr. Jacob Geiger of St. Joseph to be present and give some advanced ideas on surgery. At that meeting the regular election of officers for the ensuing year will take place. The membership committee, composed of Dr. J. D. Dunham, Dr. L. R. Doolin and Dr. A. G. Minnick will recommend all eligible physicians applying for membership and, if thought expedient by the society, they will be taken into full membership.

A full report will be called for from all committees, including the report of the secretary and treasurer. The county society is striving to give the people clean, honest men for their family physicians.

N. M. WETZEL, M.D., President.

GREENE COUNTY MEDICAL SOCIETY

The Greene County Medical Society held its regular semi-monthly meeting Friday, October 24, with an attendance of twenty-four.

A committee from the Visiting Nurses' Association was present in the interest of an educational campaign against tuberculosis, its prophylaxis and the care of patients among the poor. The object is to have short, spicy articles on these topics from the members of our society published in the daily papers so that a different article will appear each day. The society indorsed the movement and appointed a committee consisting of Drs. Coffelt, Fuson and Klingner to solicit and collect these articles from the members. In this way we hope an interest will be awakened among the laity so that the class of patients who most need this information and help—the very poor—may be benefited.

Dr. Ralston led the discussion on the subject for the evening, "Anesthesia." From his experience of many years he gave much valuable information in regard to the administration of anesthetics. Quite a number of the members took part in the general discussion that followed.

The work this year has been the best that the society has ever accomplished. Illegal practitioners have been arrested and tried; one was convicted and fined \$50 and costs; the charge against another was dismissed on a technicality but he was immediately rearrested; still another, W. E. Wyett, an optometrist, charged with practicing medicine without a license, admitted his guilt and on his promise to leave the state was released. I find we have more work along this line and we expect to be ready for the November term of court.

THOMAS O. KLINGNER, M.D., Secretary.

HICKORY COUNTY MEDICAL SOCIETY

Hickory County Medical Society met in regular session at the office of Dr. Nevins in Wheatland, Tuesday, November 4. The meeting was called to order by the president, Dr. H. C. Brookshire. The following members were present: Drs. H. C. Brookshire, J. W. Murray, C. V. Steward, George C. Losey, W. U. Hodges, R. C. Nevins and A. S. Johnson. The minutes of the last meeting were read and approved.

Dr. J. W. Murray of Quincy read an interesting paper on "Rheumatism," and Dr. R. C. Nevins of Wheatland one on "Influenza," after which the society

took the subjects and a lively and interesting discussion followed.

Several interesting cases were reported and discussed.

Some of the features of our next meeting will be two papers by Drs. Losey and Johnson and election of new officers for the ensuing year. A great deal of interest and enthusiasm is being accomplished. Society adjourned to meet at Hermitage, Dec. 2, 1913.

R. C. NEVINS, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at 2:30 p. m., Friday, November 7, with Dr. T. J. Payne in the chair. The members present were Drs. Lewis, Bonham, Moore, Watts, Temple, Pritchett, Payne, Lawrence and Temple.

There being no clinics or papers for the day the society elected officers for 1914, which resulted as follows: President, Dr. Thomas J. Payne; vice-presidents, Drs. C. B. Lawrence and W. M. Pritchett; secretary-treasurer, Dr. C. W. Watts; delegate, Dr. C. H. Temple; alternate, Dr. W. M. Pritchett; censors, Drs. C. O. Lewis, Bonham and C. H. Lee; committee on program and scientific work, Drs. Fleet, Kitchen and Hawkins; committee on public health and public instruction, Drs. Moore, Wright, Thompson and Vaughn; committee on pure food and drugs, Dr. H. K. Givens.

The secretary read the annual report for 1913, which was approved.

The secretary read the application for membership of Dr. Walter M. Dickerson of Armstrong. The Board of Censors made a favorable report for his admission and he was elected to membership.

The society adjourned at 4 p. m. to meet the first Friday in December. We now have a membership of twenty-three.

C. W. WATTS, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

MEETINGS AND PROGRAMS

GENERAL SECTION

Sessions are held in the rooms of the Kansas City Medical Library on the thirteenth floor of the Rialto building, Ninth street and Grand avenue, Tuesday evenings at 8 o'clock. Both phones Main 1769.

VISITORS WELCOME TO PROFESSIONAL PROGRAMS

Tuesday Evening, Oct. 14.

1. Presentation of cases.
2. "The Relations of Reactive Processes to Sarcomas" A. E. Hertzler

Tuesday Evening, Oct. 21

- "The Use of Tuberculin in the Treatment of Tuberculosis" W. W. Duke

Tuesday Evening, Oct. 28

1. Symposium on Prostitution.
Opened by addresses by Dr. J. N. Jackson, W. L. Eastlake, Rev. Joseph M. M. Gray and Rev. E. Combie Smith.

Tuesday Evening, Nov. 4.

- "Vicarious Menstruation" E. T. Van Eman

Tuesday Evening, Nov. 11

- "Rheumatoid Arthritis" L. Milne

Tuesday Evening, Nov. 18

- "The Diagnosis of Breast Tumors" A. E. Hertzler

Tuesday Evening, Nov. 25.

Symposium on Tonsil.

EYE, EAR, NOSE AND THROAT SECTION

Meeting to be held November 13 in the Library room, Rialto building.

1. "Report of Interesting Laryngeal Cases" D. Walton Hall
2. "The Value of Prisms in Muscular Anomalies" Wm. M. Reed
3. "Lantern Exhibit of Pathological Specimens of the Eye" T. S. Blakesley

THE OBSTETRIC AND PEDIATRIC SECTION

Will meet at the Milk Maid's Tavern, Grand Avenue Temple, Thursday, November 13; dinner at 6:30 p. m.

- Paper—"Strabismus" Joseph W. Kimberlin, M.D.
 Paper—"Mollusum Fibrosum Gravidarum" Richard L. Sutton, M.D.
 Paper—"Extra-Uterine Pregnancy" William A. Shelton, M.D.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

ALPHONSO H. MADRY, M.D.

Born July 12, 1862. Died Aug. 25, 1913.

At the September meeting of the Lawrence-Stone County Medical Society the following resolutions were adopted in memory of Dr. A. H. Madry:

WHEREAS, The Lawrence-Stone County Medical Society has in the death of Dr. A. H. Madry lost a member of whom we were justly proud and could ill afford to lose; whose counsel was always good and tended to elevate our profession; and

WHEREAS, The loss of such a member is always an incident that our society views with a heavy heart and saddened thoughts, a breaking of the chain of fraternal companionship; therefore, be it

Resolved, That we will all work for the upbuilding of our society and use all means to elevate our profession to the high plane that was his ideal; be it further

Resolved, That a copy of these resolutions be sent to Dr. Madry's family, a copy placed on our minutes and a copy sent to the state JOURNAL for publication.

W. F. AMENT,
F. S. STEVENSON,
R. C. ROBERTSON,
Committee.

Dr. F. S. Stevenson read the following tribute to the many lovable qualities possessed by Dr. Madry and his devotion to his family, his profession and his patients:

Mr. President and Gentlemen of Lawrence-Stone County Medical Society:—Since our last meeting we have suffered an irreparable loss by the death of one of our most active and best loved members, Dr. A. H. Madry. He came to us a quarter of a century ago from Tennessee, a true Southern gentleman. He labored faithfully to promote the interests of our society and was an untiring worker in the interests of the profession generally. He gave to our profession all that was best in him and gave it freely, spending his time and money for years as our district councilor of the State Medical Association. He despised, with an intensity born of bitter experience, the quack, the abortionist and everything that smacked of irregularity and that tried to cover up its sins under the guise of medicine. Hampered through life by a weakened constitution, we have wondered a thousand times how so brilliant an intellect could be contained in so frail a body. He gave his best efforts to the people, working for them at great cost to himself. His work

for the upbuilding of our profession will stand for all time. His work in our county, district and state societies and on medical economics is already bearing fruit and his work along this line will be felt in the years to come. We have heard him say many times that he never expected to live to be greatly benefited by his labors in this work, but that he hoped to be able to help those who came after him to make the practice of medicine better. Those of us who knew him best and loved him so well thought we appreciated him. Since his death we fear, sometimes that we did not appreciate him half enough. We knew that he had a great, kind heart and that he performed many deeds of kindness, large and small, but we did not always realize what it cost him nor how far he went out of his way to do a good turn for others. He just did not seem to think of himself at all; that was the grand part of it. He was always going to do something for himself, but neglected to do it because he was always doing something for the people and those whom he loved that were dependent on his efforts. His whole life was one of sacrifice and was spent in the service of the people and his family. He



ALPHONSO H. MADRY, M.D.

worked almost until the last. For all his ailments, he just did not seem to grow old. But one day he went over yonder and left us to carry on our daily tasks without his smiles and advice to cheer us onward. His footsteps always pointed to the future, always hoping and longing for something better. Let us hope that he has reached the goal that he strived so hard to attain. Let the members of our society strive to be better men. Let us try to lift up our profession to the high plane that was his ideal. When the writer attended his funeral these lines from Will Carleton's "Country Doctor" came to his mind:

Maybe half the congregation,
Now of great or little worth,
Found this watcher waiting for them
When they came upon the earth.
This undecorated soldier,
Of a hard unequal strife,
Fought in many stubborn battles
With the foes that sought their life.

In the night-time or day-time,
He would rally brave and well;
Though the summer lark was piping
Or the frozen lances fell.
Knowing if he won the battle
They would praise their Maker's name;
Knowing if he lost the battle
Then the Doctor was to blame.
'Twas the brave old virtuous Doctor,
'Twas the good old faulty Doctor,
'Twas the faithful country Doctor
Fighting stoutly all the same.
When so many pined in sickness
He had stood so strongly by
Half the people felt a notion
That the Doctor could not die.
They must slowly learn the lesson
How to live from day to day,
But love, somehow, lost their bearings
Now this landmark is away.
But perhaps it still is better
That the busy life is done
He has seen old views and people
Disappearing one by one.
He has learned that death is master
Both of science and of art;
He has done his duty fairly
And has acted out his part.
And the strong old country Doctor,
And the weak old country Doctor
Is entitled to a furlough;
For his brain and for his heart.

Sometimes when the shadows of evening come, we sit at our office window and look across the street toward his old office, almost expecting to see the old familiar form at the window. Then we remember that the rainbow of promise lures him no longer. The warm heart that throbbed for the ills of others, the weary feet that carried him too ceaselessly, the hearty hand-clasp, the lips that spoke the kindly words of sympathy and encouragement to the afflicted, are still forever. He has cast anchor and is now resting from his labors. The only person on earth who has a harder time than the country doctor is the country doctor's wife. Let us extend our heartfelt sympathy to his wife, that noble woman who ministered to his wants so faithfully during so many years of ill health and who nursed him so carefully during his last days of sickness. Let us give to her and her children the same care in sickness that Dr. Madry would so cheerfully and conscientiously have given our families should we have been called to answer the summons first.

F. S. STEVENSON, M.D.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular meeting at Frankford, November 3. There were present Drs. T. Guy Hetherlin, C. P. Lewellen, D. M. Pearson, of Louisiana; J. J. Kennedy of Frankford; Dr. L. W. Cape, councilor of the district, and Dr. E. J. Goodwin, secretary of the state association. As the president and secretary were both prevented from attending the meeting, and a breakdown delayed the members from Louisiana there was no business transacted. The short time left for the gathering was occupied in discussing society matters in general and listening to a short talk from Dr. Cape.

The next meeting will be held at Elsberry, December 1. At this meeting a strong effort will be put forth to bring the Lincoln county physicians into affiliation and the advisability of hypenating the two counties in society work will be discussed.

All members and others desiring to join are urged to be present at Elsberry on December 1.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at its rooms in St. Joseph, Wednesday evening, October 15. President A. L. Gray in the chair. Thirty-eight members present.

The reply of Dr. F. R. Greene, secretary of the Council on Health and Public Instruction of the American Medical Association in reference to the so-called Harrison Opium Bill now pending in Congress, was read with no comments. Also a communication from Dr. Goodwin, secretary of the State Medical Association, informing this society that the state dues had been increased to \$3.00 per member.

The following applications for membership having been indorsed by the censors, were balloted on and both duly declared elected: Dr. Caryl Ashby Potter, Dr. L. Paul Forgrave.

The application of Dr. E. A. Mendall for membership was referred to the board of censors.

A committee consisting of Drs. Fred Ladd, J. F. Owens and Gray, who were appointed to wait on Dr. J. P. McChesney and extend to him an honorary membership in our society, reported that the doctor was very much pleased at the courtesy and would be glad to accept. Dr. Gray volunteered to have the doctor fill out the necessary application blank.

Dr. Ladd suggested that this society have a classified telephone directory of doctors, nurses and druggists printed, to be substituted for the classified appendix which the telephone company has discontinued in their directory.

After considerable discussion indulged in by Drs. Lee, Gray, Elam, Forgrave and Gleaves a motion was made and carried that the president appoint a committee for the purpose of initiating a movement to confer with committees of various other organizations to secure better telephone service and a continuance of the classified list. The following committee was thereupon appointed: Drs. W. E. Goetze, T. H. Ladd and J. J. Bansbach.

On motion of Dr. P. I. Leonard, seconded by Dr. Lau, the executive committee was instructed to make an investigation of fake medical advertisers that are flourishing in St. Joseph. This committee was empowered to engage an attorney for this purpose and make a report at the next meeting. The secretary was instructed to correspond with the secretary of the American Medical Association and ascertain what measures that association was engaged in to counteract the effect of fake advertising concerns.

Dr. T. R. Paul read a very interesting paper entitled "Plea for the Prompt Diagnosis and Energetic Treatment of the Initial Lesion of Syphilis." The paper was discussed by the following members: Drs. Lau, Geiger, Hartigan, Bansbach, Ladd and Elam.

Dr. A. L. Gray's paper, "Accidental and Criminal Abortion; Diagnosis and Treatment," was discussed by Drs. Geiger and Willman.

W. F. GOETZE, M.D., Secretary.

MEETING OF NOVEMBER 5.

The regular meeting was held Wednesday evening, Nov. 5, President A. L. Gray in the chair. Forty-eight members were present.

Dr. Woodson, chairman of the telephone committee, reported having interviewed the manager of the Bell Telephone Co., with no result. At the present time he was engaged in making arrangements to take the matter up with the State Public Utilities Committee. He urgently requested that all members of this society write him a letter stating what kind of service had been rendered lately and make whatever complaint he felt entitled to. Dr. Lee was appointed to notify all members in

South St. Joseph, and Dr. John Doyle all members from A to M, and Dr. Dandurant all members from N to Z to write this letter to Dr. Woodson.

Dr. A. L. Gray reported that Dr. Chesney, who had been invited to permit his name to appear on our roll of honorary members, had not yet filled out the application blank, but that he would see the doctor and have it ready for action at the next regular meeting.

A lengthy communication from Dr. F. R. Green, of the American Medical Association, regarding handling of advertising doctors and quacks was read with no remarks. Drs. Gleaves and Leonard, representing the committee having in charge the engaging of an attorney for the purpose of investigating the advertising offices and quacks, reported they had been very active in their duty and would have a report ready at the next meeting.

Dr. Hartigan addressed the society and suggested that all doctors use their influence to prevent prescriptions being taken to the retail druggists of our city who are making it a practice of advertising remedies and cure-alls for various diseases in our daily papers.

Dr. Stamey called the society's attention to the fact that at the present time this city is without a police surgeon or emergency doctor. This matter, after considerable discussion by Drs. Stamey, Leonard, Morton, Woodson, Bell, Long and Elam, was referred to the Medical Service Committee with instructions to report at the next regular meeting.

One of the most interesting papers of the year, so pronounced by the members, was read by Dr. J. M. Bell, entitled "After the Obstetrician—the Gastro-Enterologist." This paper was discussed by Drs. Caryl Potter, D. Morton, A. L. Gray, W. T. Elam and R. Willman.

By request of Dr. Morton, seconded by Dr. Fassett, the president was instructed to notify Dr. Bell to prepare a subsequent paper on "Ptosis," to be read at an early meeting.

W. F. GOETZE, Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session in Drs. Potter and Potter's office. Meeting was called to order by Dr. B. B. Potter, president. Members present: Drs. B. B. Potter, W. A. Potter, W. F. Justice, E. L. Mitchell and J. B. Bridges.

Our last meeting being held in connection with the Fifth District Medical Society meeting, and the county secretary being absent at that meeting, the minutes were with the district secretary, therefore were not read.

The members on program were absent or unprepared, consequently no papers were read, but a number of interesting cases were reported and discussed.

Our next meeting, which will be the annual election meeting, will be held at Lancaster, Mo., on December 18. All members are requested to be present.

The president appointed the following on the program for the next meeting: Paper by Dr. W. H. Zieber, paper by Dr. W. A. Potter, paper by Dr. J. B. Bridges.

J. B. BRIDGES, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met in the office of Dr. Tate, at Morley, October 6. Present: Drs. T. V. Miller, A. W. Mayfield, F. O'Kelly and T. O. Rhodes of Sikeston; Dr. Finney of Chaffee; Dr. Cannon of Farnfelt. Visitors: Drs. T. E. Tomlinson, Stepp and Hutton. The president and vice-president being absent, Dr. Rhodes was elected to preside.

Paper by Dr. T. V. Miller on "Puerperal Eclampsia." He laid particular stress on the cause and treatment. The paper was discussed by all present, the consensus of opinion being that a pregnant woman should consult a physician early and often.

The next meeting will be at Sikeston the first Monday in January, 1914.

G. S. CANNON, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 N. Dearborn Street, Chicago, Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

GLUTEN FOOD A, BARKER'S.—A wheat-gluten flour, containing not more than 4 per cent. of carbohydrates and 87 per cent. protein.

GLUTEN FOOD B, BARKER'S.—A wheat-gluten flour, containing not more than 7 per cent. carbohydrates and 85 per cent. protein.

GLUTEN FOOD C, BARKER'S.—A wheat-gluten flour, containing not more than 12 per cent. of carbohydrates and 83 per cent. protein.

Barker's gluten foods are indicated when a practically starch-free diet is desired, particularly in most forms of diabetes. It can be taken uncooked or made into muffins. Herman Barker, Somerville, Mass. (*Jour. A. M. A.*, Sept. 27, 1913, p. 1042).

ACNE BACTERIN POLYVALENT.—For description of Acne Vaccine see N. N. R., 1913, p. 211. Abbott Alkaloidal Co., Chicago.

COLI-BACTERIN POLYVALENT.—For description of Bacillus Coli Vaccine see N. N. R., 1913, p. 221. Abbott Alkaloidal Co., Chicago.

FRIEDLANDER-BACTERIN POLYVALENT.—For description of Friedlander Vaccine see N. N. R., 1913, p. 222. Abbott Alkaloidal Co., Chicago.

GONOCOCCUS-BACTERIN POLYVALENT.—For description of Gonococcus Vaccine see N. N. R., 1913, p. 223. Abbott Alkaloidal Co., Chicago.

PNEUMO-BACTERIN POLYVALENT.—For description of Pneumococcus Vaccine see N. N. R., 1913, p. 224. Abbott Alkaloidal Co., Chicago.

STAPHYLO-ACNE-BACTERIN POLYVALENT.—For description of mixed vaccines see N. N. R., 1913, p. 224. Abbott Alkaloidal Co., Chicago.

STAPHYLO-ALBUS-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

STAPHYLO-AUREUS-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

STAPHYLO-BACTERINS (HUMAN) ALBUS-AUREUS-CITREUS.—For description of Staphylococcus Vaccines see N. N. R., 1913, p. 225. Abbott Alkaloidal Co., Chicago.

STREPTO-BACTERINS (HUMAN).—For description of Streptococcus Vaccines see N. N. R., 1913, p. 226. Abbott Alkaloidal Co., Chicago.

TYPHO-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

TYPHOID PROPHYLACTIC.—For description of Typhoid Vaccine see N. N. R., 1913, p. 227. Abbott Alkaloidal Co., Chicago. (*Jour. A. M. A.*, Oct. 4, 1913, p. 1297).

NINHYDRIN.—Ninhydrin is triketohydrindenhydrate a derivative of inden. Colorless crystals, readily soluble in water. The aqueous solution gives a blue color on boiling with protein bodies, or amino-acids derived from them, which have the amino group in the alpha position. Ninhydrin is used in the diagnosis of pregnancy according to the method of Abderhalden. Farbwerke-Hoechst Co., New York (*Jour. A. M. A.*, Oct. 11, 1913, p. 1377).

PLACENTAPEPTON.—A peptone derived from the placenta. It is used in applying the optical test for pregnancy according to Abderhalden. Farbwerke-Hoechst Co., New York (*Jour. A. M. A.*, Oct. 11, 1913, p. 1377).

ANTIRABIC VACCINE.—It is prepared according to the method of Pasteur and is a complete treatment, consisting of 25 doses, to be administered during 21 days. Schieffelin & Co., New York (*Jour. A. M. A.*, Oct. 11, 1913, p. 1377).

COPPER CITRATE, MERCK.—This salt complies with the standards for copper citrate, N. N. R., Merck & Co., New York (*Jour. A. M. A.*, Oct. 11, 1913, p. 1377).

TRANSFER OF AGENCY.—The biologic products of the Sophian-Hall-Alexander Laboratories which were accepted for inclusion with N. N. R. are now sold by E. R. Squibb & Sons (*Jour. A. M. A.*, Oct. 11, 1913, p. 1377).

REFORM IN MEDICINES

THE TRUTH ABOUT OZONE.—Manufacturers of ozone machines have vaunted ozone as a valuable remedy in many diseases, as an effective room disinfectant, as a "purifier of the air" and a restorer of exhausted human vitality. How misleading and even mischievous such claims are is shown by an investigation and discussion of the ozone question by Jordan and Carlson (*Jour. A. M. A.*, Sept. 27, 1913, p. 1007). Ozone is a toxic gas. So far as the evidence is concerned, ozone produces no reaction in the human organism or in the lower animals that can be regarded as in any degree beneficial either in combating or warding off infectious diseases. On the contrary, all visible physiologic changes produced by the inhalation of ozone are distinctly of an injurious and weakening character. The claims made for ozone as a practical room ventilator are farcical if they were not altogether deplorable. Ozone is of no practical importance as a means of destroying bacteria. The experiments of Jordan and Carlson have been confirmed by the work of Sawyer, Beckwith and Skolfield (*Jour. A. M. A.*, Sept. 27, 1913, p. 1013), who conclude that the use of ozone machines in public buildings should be prohibited by health authorities. The investigations again prove how nec-

essary it is to consider with critical doubt the claims of those who have for sale something of asserted prophylactic or therapeutic value (*Jour. A. M. A.*, Sept. 27, 1913, p. 1045).

FRIEDMANN VACCINE.—The report of Dr. Barnes of the Rhode Island State Sanatorium for Tuberculosis adds to the evidence that the treatment with the Friedmann vaccine has no advantage over other methods of treating tuberculosis and that, in all probability, it is a dangerous one. In view of the fact that it seems impossible to find a single favorable report, the time has come for an end to the hope that in the Friedmann vaccine there is a cure for tuberculosis. In view of the commercial exploitation of the treatment by means of "Friedmann Institutes" it is necessary that the public be acquainted with the dangers and worthlessness of the treatment (*Jour. A. M. A.*, Sept. 27, 1913, p. 1050).

SINKINA.—A report of the Council on Pharmacy and Chemistry states that Sinkina, a new "malaria specific," sold by the Metropolitan Pharmacal Company, New York, from the available evidence appeared to be simply a dilute sugar-alcohol-water solution, containing a little oil of eumin (Roman caraway). At first rejected by the Council because the evidence was held not to substantiate the claims, it was later submitted to clinical trial because of extensive advertising. For the clinical trials, Sinkina and a eumin oil preparation made in the A. M. A. Chemical Laboratory were used. The trials, made by physicians actively engaged in the study of malaria, demonstrated that the preparation was without action on the malarial plasmodium and that its action could not be distinguished from the eumin oil preparations (*Jour. A. M. A.*, Sept. 27, 1913, p. 1056).

FEMALE WEAKNESS CURES.—Among the victims to quackery of every sort women far outnumber men. They are always more trustful, and, as a rule, find it more difficult, especially when suffering, to believe that any one can be base enough to abuse their confidence, much less to take advantage of their helplessness in order to plunder and injure them. Some concerns engaged in selling medicines to women are: Kokomo Medicine Company (Mrs. Ida M. Wade), Kokomo, Ind.; Mrs. Georgia Palmer, Chicago; Atlanta Remedy Company (Dr. Lily M. Norrell), Atlanta, Ga.; Mrs. F. Beard Company, Dayton, Ohio; Dr. Charlotte Christopher, Chicago; Hager Medical Company, South Bend, Ind.; Margaret M. Livingston, M.D., Chicago; J. A. McGill, M.D., Chicago; Phen-ix Chemical Company, Warsaw, Ind.; Woman's Mutual Benefit Company (Mrs. Harriet M. Richards), Joliet, Ill.; Sanova Company, Toledo, Ohio; Dr. Sonthington Remedy Company, Kansas City, Mo.; Vanderhoof & Company (Mrs. M. Summers), South Bend, Ind.; Woman's Remedy Company (Dr. Grace Feder Thompson), San Francisco, Cal.; Vis-Vitae Medicine Company, Toledo, Ohio (*Jour. A. M. A.*, Oct. 4, 1913, p. 1311).

ANUSOL SUPPOSITORIES.—A circular now sent out states: "In Hemorrhoids and all Inflammatory Rectal Diseases let your first thought continue to be Anusol Hemorrhoidal Suppositories; they have Earned your lasting Confidence." Also the medical profession is told that these suppositories have for years "maintained their world-wide reputation." The short memory of the medical profession must be known. How, other-

wise, would a firm expect physicians to believe that a product had "earned" their "lasting confidence" when the result of an examination by the A. M. A. chemists has shown that the suppositories contained practically no "Anusol." Moreover, since these findings were a practical verification of the findings of a foreign chemist, it is not quite clear what is meant by the term "world-wide reputation." While formerly Anusol Suppositories were stated to contain Bismuth iodoresorcin-sulphonate (Anusol), they are now stated to contain "bismuth oxyiodid and resorcin sulphonate" (*Jour. A. M. A.*, Oct. 11, 1913, p. 1392).

SANATOGEN.—The promoters of Sanatogen are making capital out of the fact that a "grand prix" was awarded to Sanatogen at the Exhibition of Medical and Surgical Material held in London at the same time that the Seventeenth International Congress of Medicine was in session. Those familiar with the awarding of prizes at commercial exhibitions will attach little weight to this "honor." The commercial exhibition was entirely distinct from the scientific exhibit of the congress. It was managed and conducted by a British drug journal. Among the list of the award jury was the name of Dr. Stephen Paget, who stated that he was not on the jury and knows nothing about the matter (*Jour. A. M. A.*, Oct. 11, 1913, p. 1392).

EAU DE QUININE.—The A. M. A. Chemical Laboratory finds a specimen to have a red color and a flavor like hair oil. It contained about 66 per cent. of ethyl alcohol, but was free from wood alcohol. It also appeared devoid of appreciable quantities of glycerin or fatty oils. The examination also indicated the presence of 0.02 per cent. of quinin or cinchona alkaloids, showing that while, according to reports, the addition of quinin at one time may have been considered an unnecessary expenditure, at the present time the preparation contains a trace of quinin, just enough, perhaps, to escape prosecution under the Food and Drugs Act for being misbranded (*Jour. A. M. A.*, Oct. 18, 1913, p. 1476).

ABSORBINE, JR.—This is a liniment sold by W. F. Young, Springfield, Mass. It is inferentially sold as a cure for rheumatism, neuralgia, headache, variecocele, orchitis, toothache, corns, goiter, dandruff, "catarrh," hay-fever, pills, elephantiasis, milk leg and several other conditions. The A. M. A. Chemical Laboratory reports that Absorbine, Jr., appears to be an acetone extract of some plant, probably wormwood, with the possible addition of some oil of sassafras and menthol (*Jour. A. M. A.*, Oct. 25, 1913, p. 1562).

BOOK REVIEWS

MODERN OPHTHALMOLOGY. A Practical Treatise on the Anatomy, Physiology and Diseases of the Eye. By James Moores Ball, M.D., LL.D., Dean and Professor of Ophthalmology, the American Medical College of St. Louis, etc. Third Edition, Revised and Enlarged. Illustrations. F. A. Davis, Philadelphia. Pages, 911. 1913. Cloth, \$7.50; Half Morocco, \$9.

This third edition of a volume that won a place for itself with the appearance of its first edition possesses many new features and is in many respects vastly superior to the earlier editions. Four entirely new

chapters appear on "Elementary Optics," "Normal Ocular Refraction," "Legal Relation of Ophthalmology" and "Notes on Ophthalmic Therapeutics." Twenty-eight new illustrations have also been added to the volume with a thorough revision of the whole text. The three words that best describe this work are accuracy, completeness and simplicity.

DISEASES OF THE EYE. By George E. deSchweinitz, M.D., Professor of Ophthalmology in the University of Pennsylvania. Seventh Edition. Thoroughly Revised. Octavo of 979 pages, 360 Text Illustrations and 7 Lithographic plates. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$5, net; Half Morocco, \$6, net.

Ophthalmologists will welcome the seventh edition of this work which has assumed the proportions of a classic in ophthalmology. The new edition has been thoroughly revised and much new matter has been added to its pages. Practically all the discoveries of the past three years have been given space in the volume, including recent adaptations of vaccine therapy as in gonorrheal iritis, salvarsan in ophthalmology and the bacterial origin of iritis and uveitis.

Special paragraphs appear for the first time on sporotrichosis of the eyelids and conjunctiva; epithelial dystrophy of the cornea; cysts of the retina; Schiotz' tonometer, ophthalmodiaphanoscopy and other subjects of like interest and importance.

PREVENTIVE MEDICINE AND HYGIENE. By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard; formerly Director of the Hygienic Laboratory, U. S. Public Health Service. With Chapters on Sewage and Garbage by Geo. C. Whipple, Professor of Sanitary Engineering, Harvard; Vital Statistics, by Cressy L. Wilbur, Chief Statistician, Bureau of the Census, Department of Commerce and Labor; the Prevention of Mental Diseases, by Thos. W. Salmon, Director of Special Studies, National Committee for Mental Hygiene, etc. Pp. 1074. Illustrated. D. Appleton & Co., New York, 1913. \$6.

Such rapid progress has been made in hygiene and sanitation within the past few years that the subject of preventive medicine has become a specialty. The author has endeavored herein to meet the demand for a treatise on the new topic, and the work has been planned to include those realms of medical and related sciences that form the foundation of public health preservation. The author has had long and varied experience in public health work and none is more aptly fitted than he to compile a work of this kind. The work is divided into two parts. The first deals with personal hygiene, and the second of sanitation.

THE DISEASES OF CHILDREN. By Henry Enos Tuley, M.D., late Professor of Obstetrics, University of Louisville, Medical Department, etc. Second Edition. Pp. 684. Illustrated. C. V. Mosby, St. Louis, 1913. \$5.50.

The student and the practitioner alike find this a peculiarly convenient volume. The second edition contains a thorough revision of the text beside addition of much new matter, including food formalae. The illustrations are unusually interesting. That showing Koplik's spots in measles being the first illustration we remember to have seen that shows these spots as they actually appear in the mouth.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Fourth Edition, Thoroughly Revised and Enlarged. Octavo of 857 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$4; Half Morocco, \$5.50, net.

The fourth edition contains extensive alterations because of the many changes in opinions of dietetic authorities and the many new facts that have lately been added to the knowledge of foods and metabolism. The mechanism of digestion has received an added section in the volume, and recent departures in dietetic study possessing any promise of value have come in for due consideration.

Like previous editions, the work is preeminently practical and is one of the really few valuable works on dietetics.

MINOR AND OPERATIVE SURGERY, INCLUDING BANDAGING. By Henry R. Wharton, M.D., Professor of Clinical Surgery in the Woman's Medical College, Philadelphia. New (Eighth) Edition, Enlarged and Thoroughly Revised. 12mo, 700 pages, with 570 Illustrations. Cloth, \$3, net. Lea & Febiger, Philadelphia and New York, 1913.

This new edition has undergone thorough and careful revision. Much new material has been added, and the obsolete has been omitted. The numerous illustrations contained in the volume lend it special value, and the section devoted to bandaging is replete with photographs that graphically show the methods considered.

A MANUAL OF OTOTOLOGY. By Gorham Bacon, A.M., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York. New (Sixth) Edition, Thoroughly Revised. 12mo, 536 Pages, with 164 Engravings and 12 Plates. Cloth, \$2.25, net. Lea and Febiger, Philadelphia and New York, 1913.

This work has many friends among the profession who will hail the appearance of a new edition with gladness. This edition has been carefully revised, and many sections have been entirely rewritten and engrossed. The modern methods of diagnosis and treatment have been given special emphasis. Bacon's manual of otology has been considered one of the standards ever since the first edition appeared, and this new edition amply preserves the traditions.

PRINCIPLES AND PRACTICE OF GYNECOLOGY FOR STUDENTS AND PRACTITIONERS. By E. C. Dudley, A.M., M.D., Ex-President of the American Gynecological Society, etc. Sixth Revised Edition. Lea & Febiger: Philadelphia and New York. Illustrated. Pp. 795. 1913.

The sixth edition of this most trustworthy work has been subjected to a painstaking revision. Many of the chapters have been altogether rewritten, with excision of matter not positively relative.

GOLDEN RULES OF GYNECOLOGY. Aphorisms, Observations and Precepts on the Proper Diagnosis and Treatment of Diseases of Women. By George B. Norberg, M.D., Professor of Diseases of Women and Clinical Gynecology, University Medical College, Gynecologist, Kansas City General Hospital, etc. Pp. 253. C. V. Mosby, St. Louis, 1913.

An attractive little volume presenting briefly and concisely those methods of gynecologic diagnosis and treatment that have the sanction of successful practice. No attempt is made to cover the many subjects that are usually found in text-books on gynecology, but which belong properly in the domain of general surgery.

A TREATISE ON THE DISEASES OF WOMAN FOR STUDENTS AND PRACTITIONERS. By Palmer Findley, B.S., M.D., Professor of Gynecology, State University of Nebraska, College of Medicine, etc. Illustrated. Pp. 954. Lea & Febiger; Philadelphia and New York, 1913.

This volume is grounded on the author's "Diagnosis of Diseases of Women," but the transposed material has been subjected to rigid revision. Special chapters are devoted to non-operative methods of treatment, hygiene and dress, preparation for operation, field of operation and surgical utensils, anesthesia, diet and postoperative care and complications.

Diagnosis is placed on an anatomical basis, macroscopic and microscopic. Individual chapters are given to gonorrhea and tuberculosis in the female, and large space is devoted to discussion of uterine involvements.

A PRACTICAL TREATISE ON THE CAUSES, SYMPTOMS AND TREATMENT OF SEXUAL IMPOTENCE AND OTHER SEXUAL DISORDERS IN MEN AND WOMEN. By William J. Robinson, M.D., Chief of the Department of Genito-Urinary Diseases and Dermatology, Bronx Hospital and Dispensary, etc. Pp. 422. Critic and Guide Co., New York, 1913. \$3.

We wonder why it is that the typography of books on this subject must always be of the 'searched' type. There must be some reason for it, because we don't remember having seen one that was not compiled like an extra edition of a sensational newspaper.

GNORRHEA IN WOMEN. Its Pathology, Symptomatology, Diagnosis and Treatment, together with a review of the rare varieties of the disease which occur in men, women and children. By Charles C. Norris, M.D., Instructor in Gynecology at the University of Pennsylvania. Octavo of 521 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

No disease presents to the practitioner more phases than gonorrhea. Dr. Norris has placed them before us in most interesting, instructive and comprehensive form in this monograph. Beginning with an entertaining historic narrative embracing the ancient views, down to the discovery of the gonococcus of Neisser, he describes the bacteriology and pathogeny of the disease in an encyclopedic way. The sociologic aspects of the affliction, its relation to abortion and sterility and blindness following eye infection of the new-born, and methods adopted by the different governments for the limitation and suppression of the social evil are thoroughly dealt with.

The chapter on prophylaxis is especially interesting and valuable at a time when sex hygiene seems to be monopolizing the center of the educational stage.

After a very practical description of how to examine patients with gonorrhea he considers very minutely the manifestations of the disorder in the various divisions of the genital tract. A special chapter is devoted to gonorrhea in pregnancy, labor and the puerperium. The many complications, local and general, are thoroughly presented, together with a complete

and practical discussion of gonorrheal therapy. The book is the best type of what a monograph should be. The student will find it a reliable source of information and the practitioner who wishes to keep himself abreast of the advances in this department of his work will read it with greatest benefit. It should be on every doctor's book-shelf. The publishers have done their part well as regards paper, type and illustrations, but whilst the book gratifies the eye it burdens the hand.

THE PROTEIN SPLIT PRODUCTS IN RELATION TO IMMUNITY AND DISEASE. By Victor C. Vaughan, M.D., LL.D., Dean of the Department of Medicine and Surgery of the University of Michigan; Victor C. Vaughan, Jr., M.D., A.B., in charge of the Tuberculosis Work of the Detroit Board of Health, and J. Walter Vaughan, M.D., A.B., junior attending surgeon to Harper Hospital, Detroit. 12 mo, pp. 476, illustrated. Cloth, \$3.00, net. Philadelphia and New York: Lea & Febiger, Publishers, 1913.

All students of immunity who read this volume will no doubt be deeply impressed. It represents the results of many years of arduous labor directed toward a solution of certain phenomena included under the subject of immunity.

The Vaughan theories throw a flood of light on many common phenomena. They are simple, rational and rest almost entirely on the properties of proteolytic ferments, and the fact that proteins contain a poison group which may be liberated in the retort or in enteral and parenteral digestion.

The parenteral digestion of bacteria (proteins) and the consequent liberation of the poisonous constituent is responsible for the symptoms of infectious diseases. The variable distribution within the body of different viruses accounts for the characteristic symptomatology of different diseases. Viruses having a similar distribution produce similar symptoms, as is illustrated by the fact that the various meningitides are indistinguishable by their symptomatology, and further by the fact that on the basis of symptoms typhoid fever and miliary tuberculosis are indistinguishable.

The same mechanism above illustrated forms the basis of natural and acquired immunity, protein sensitization (anaphylaxis), etc. It will be noted that "protein sensitization and bacterial immunity, apparently antipodal, are in reality identical."

Mention cannot be made of the various phenomena investigated nor the details of the principles underlying their explanation. It will suffice to add that this volume contains a discussion of the chemistry of the bacterial cell; the split products of the tubercle, anthrax and pneumococcus organisms; the nature of toxin; the use of vaccines; the use of tuberculin; protein fever; the specific ferments of the cancer cell, etc.

Investigations in immunity have yielded various therapeutic and diagnostic procedures. Too frequently patients do not obtain the benefits of the proper use of these procedures. It is necessary for the physician to have a conception of the theories of immunity before he can make proper use of vaccines and sera or to make proper deductions from the results of serological tests. Hence the study of immunity on the part of the profession in general should be stimulated.

Vaughan's book should be read by every physician. It has a distinct individuality. It contains the investigations and original theories of Vaughan. It stands by itself.

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EDITOR

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ORIGINAL ARTICLES

THE CLASSIFICATION OF THE CHRONIC RESISTANT MACULAR AND MACULOPAPULAR SCALY ERYTHRODERMIAS

RICHARD L. SUTTON, M.D.
KANSAS CITY, MO.

The possible relationship of the various conditions comprising that ill-defined group of dermatoses for which Fox and MacLeod¹ have suggested the very apt designation of "chronic resistant scaly erythrodermias," is a matter of more than academic interest.

Brocq² would classify the various clinical entities under the general heading of "parapsoriasis," with three subdivisions: parapsoriasis guttata, parapsoriasis lichenoides and erythrodermic pityriasque en plaques disseminees; and would include in the group not only Unna's³ parakeratosis variegata, but also Jadassohn's⁴ psoriasiform and lichenoid exanthem and nodular psoriasiform dermatitis, Neisser's⁵ lichenoid eruption, Fritz Juliusberg's⁶ psoriasiform and lichenoid exanthem and pityriasis lichenoides chronica, Boeck's⁷ dermatitis variegata, Crocker's⁸ lichen variegatus, Colcott Fox and MacLeod's¹

resistant muculopapular scaly erythrodermias and the dermatosi squamosi anormale of Casoli.⁹

Civatte¹⁰ believes that many of the disorders of this class bear a definite relation to tuberculosis and the tuberculides. It is interesting to note, however, that the sections from one of Civatte's cases were histologically identical with those from Darier's¹¹ case of "sarcoide cutanee," consequently, as Menahem Hodara¹² intimates, it is probably safer to consider each case in all its aspects, and not place too much stress on any single clinical or histopathologic phase.

In describing the symptom-complex for which Pernet suggested the name "xantho-erythrodermia perstans," Crocker¹³ was at first in doubt as to whether it should be considered as a hitherto unknown affection, or included under "erythrodermie pityriasque en plaques disseminees"—one of the cases, No. 10 in the series, being clinically indistinguishable from this variety of Brocq's disease; but finally, in view of the large size of the affected areas, their smoothness and yellowish color, their more or less regular distribution, the presence of a distinct degree of infiltration in a large proportion of the patches, and the favorable manner in which the lesions responded to treatment, he concluded that the condition did not belong to the parapsoriasis group. In Crocker's opinion, dermatitis psoriasiformis nodularis, parakeratosis variegata and erythrodermie pityriasque en plaques disseminees, all were but different manifestations of a single disease, which he preferred to call "lichen variegatus," a clinical term designating a conspicuous feature of many of the typical cases that had been described. The appellation "parakeratosis," first rather vaguely employed by Auspitz¹⁴ in 1881, and later

1. On a Case of Parakeratosis Variegata, Brit. Jour. Derm., 1901, p. 319.

2. Les erythrodermies pityriasques en plaques disseminees, Rev. gen. de clin. et de therap., 1897, p. 577; Les Parapsoriasis, Ann. de Derm. et de Syph., May, 1902; Parapsoriasis, Jour. Cut. Dis., 1903, p. 315; Traite Elementaire de Dermatologie Pratique, Octave Doin, Paris, II, p. 221.

3. Ueber die parakeratoses im allgemeinen und eine neue Form derselben (Parakeratosis variegata), Monats. f. prakt. Derm., x, 404.

4. Ueber ein eigenartiges psoriasiformes und lichenoides exanthem, Verhand. der deutsch. Gesellsch., fifty-fifth Congress, Breslau, 1894; Dermatitits nodularis psoriasiformis, Festschrift, Kaposi, 1900.

5. Zur Frage der lichenoiden Eruptionen, Verh. d. deutsch. Dermat. Gesellsch., fifty-fifth Congress, Breslau, 1894.

6. Ueber einen Fall von psoriasiformis und lichenoiden Exanthem, Archiv. f. Derm. u. Syph., 1897, p. 256; Pityriasis lichenoides chronica, Archiv. f. Derm. u. Syph., 1899, p. 350.

7. Cited by Juliusberg, loc. cit.

8. Lichen variegatus, Brit. Jour. Derm., 1901, pp. 19 and 55.

9. Dermatosis squamosa anormale, Giorn. ital. d. mal. ven., 1901, pp. 719, 742 and 749.

10. These de Paris, G. Steinhil, Paris, 1906; Pour servir a l'etude des tuberculides papulo-squameuses, etc., Ann. de Derm. et de Syph., 1906, p. 210.

11. Tr. Soc. de Derm., Paris, Feb. 4 and April 11, 1904.

12. Ein Fall von Parakeratosis Variegata, etc., Monats. f. prakt. Derm., Bd. IV, Nr. 27, S. 848.

13. Brit. Jour. Derm., 1905, p. 119.

14. System der Hautkrankheiten, Wien, 1881.

clearly defined by Unna¹⁵ as indicating "a parenchymatous edema of the transitional epithelium." Crocker would not accept. At present, however, the consensus of opinion, judging from the literature, would indicate that Unna's definition and

dermfa perstans, and also an example of a chronic, resistant, lichenoid dermatitis, the symptomatology of which is rather unusual, and unlike that of any other dermatosis that I have been able to find described.

Case 1.—A. R., female, housewife, aged 43 years. Referred to me by Dr. L. V. Dawson of Odessa, Mo. The patient was a native of Ohio, and a resident of Missouri. The cutaneous history of the family was negative, and the patient herself had never before suffered from a disease of the skin. Her general health had always been excellent. About eight years prior to the date of consulting me, she first noticed the presence of several streak-like areas of yellowish-brown

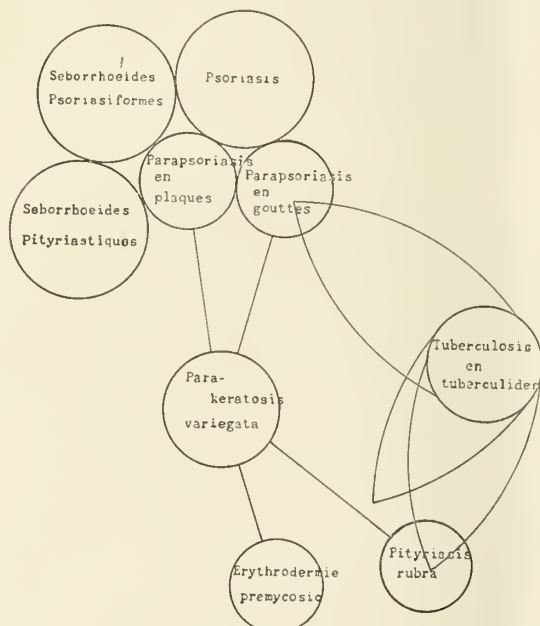
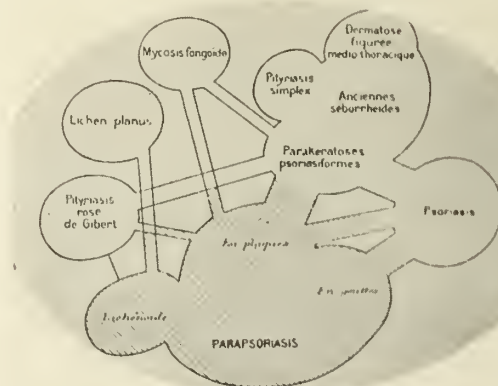


Diagram showing Civatte's conception of the relationship of the chronic resistant scaly erythrodermias to psoriasis, seborrheic dermatitis, pityriasis rubra and tuberculides.



Showing Brocq's idea of the relationship of the parapsoriasis group to some of the better-known diseases of the skin.

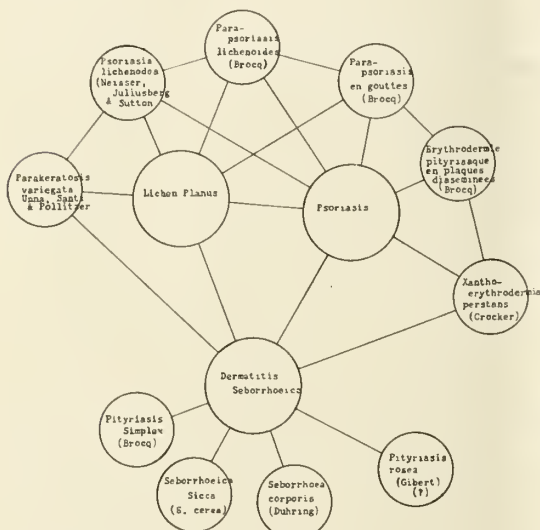
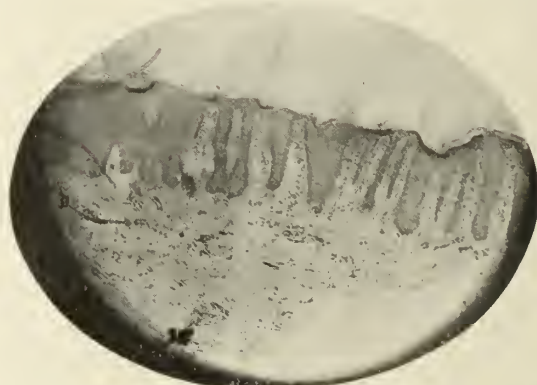


Diagram showing the relationship of the chronic resistant scaly erythrodermias to psoriasis, lichen planus, dermatitis seborrhoeica and the seborrhoeoides (the inclusion of pityriasis in the last-named group is hypothetical, see G. H. Fox, Jour. A. M. A., Aug. 17, 1912, p. 493).

adoption of the term have met with general approval.

During the past year I have had an opportunity to study a typical case of xantho-erythro-

discoloration on her arms and thighs. The long axes of the majority of the lesions were parallel with those of the affected limbs. Subjective symptoms were absent. The patient supposed the pigmented patches to be due to "liver trouble," and paid little attention to them. The areas gradually increased in number



Psoriasis lichenoides, lesion in axilla, showing papillary hypertrophy and edema of rete (moderate magnification).

and extent, many of the newer ones merging, wholly or in part, with the older, the partial conjunction resulting in the formation of peninsulas or islands of normal skin framed within the bisque-colored patches.

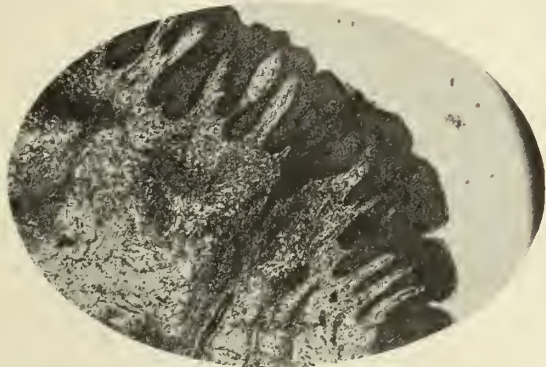
On examination, the patient was found to be a strong, well-nourished woman, a brunette, 5 feet 8 inches tall, and weighing 146 pounds. A general physical examination gave a negative result. The skin on parts other than the limbs was normal. The buccal mucous membrane was unaffected.

15. The Histo-pathology of the Diseases of the Skin, Walker's translation, Macmillan & Co., New York, 1896, p. 196.

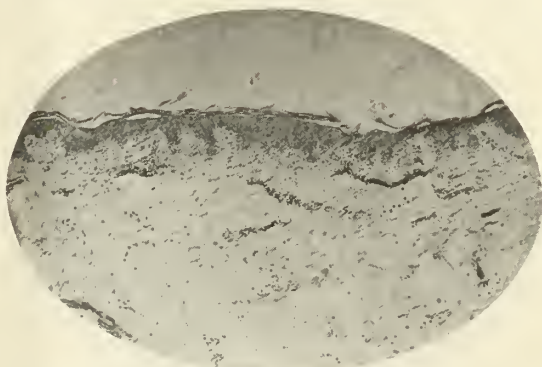
The outer aspects of the arms were involved to a somewhat greater extent than the inner, and the left limb more than the right, although the lesions were distributed in a roughly symmetrical manner over all four extremities. The individual patches were oval or oblong in outline, yellowish or pinkish in color, and very slightly scaly. On superficial examination they appeared to be elevated, but on closer inspection it was found that this was not the case, all of the lesions being flat and on a level with the normal skin. The borders were not sharply defined, although the affected areas could be readily distinguished, by both sight and

layer, which was reduced in depth to five or six cells, edema was a constant and pronounced feature. Both nuclei and protoplasm stained poorly. The usual regular and uniform arrangement of the basal layer was entirely lost. The cells were not only erratically and unevenly arranged, but many had lost their nuclei, and in some localities, as in the regions higher up in the rete, neighboring cells reacted to the basic and acid elements in the various dyes in an exactly opposite manner.

The corium also was markedly edematous, particularly at the higher levels.



Premycotic dermatitis, two years' duration, lesion in region of right clavicle. Note character of cellular infiltration.



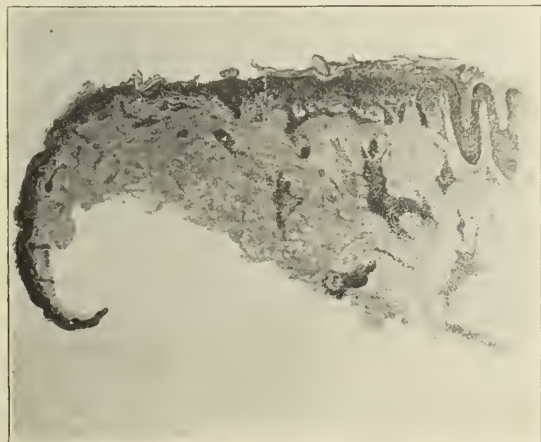
Xantho-erythrodermia perstans. The infiltration is greatest in the vicinity of the vessels.

touch, from the normal. On palpation it was found that all of the patches were infiltrated, the skin, when a fold was pinched between the fingers, appearing much thicker and less flexible than usual.

For microscopical study three pieces of tissue were excised, two from near the center of one of the most characteristic lesions on the left forearm, and one from a small island of apparently normal skin on the right upper arm. The material was fixed in aqueous formalin solution, and mounted and cut in paraffin. The usual stains were employed. The piece of skin

The coil glands and ducts were apparently normal in every way.

The papillae were somewhat flattened, but less so than in a typical example of erythrodermie pityriasique en plaques disseminées. The swollen bundles of collagen reacted poorly to the various stains, and were dimly and indistinctly outlined. The most conspicuous



Parakeratosis variegata (Menahem Hodara's specimen and photograph).



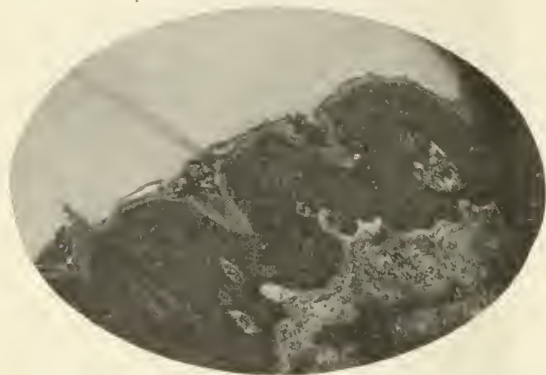
Psoriasis lichenodes, showing arrangement and lichenification of patches in the groin.

from the right arm appeared to be normal in every way. The other two specimens were histologically identical, and one description will suffice for both. The corneous stratum was composed of four or five layers of loosely interwoven, non-nucleated cellular strands, precariously attached to a much attenuated stratum granulosum. No trace of the presence of a stratum lucidum could be discovered. Throughout the prickle

change to be noted in the cutis, however, was the presence of a wide-spread cellular infiltration. While an occasional polymorphonuclear leukocyte or mast-cell was to be seen, the majority of the cells were of the small, round variety, staining deeply with the basic dyes. Although the infiltration was greatest in the immediate vicinity of the larger vessels, the papillary bodies were far from immune, the small, round type

of cells predominating here also. No giant-cells, caseation or signs of arterial thickening were to be seen, and the pathologic picture was far more suggestive of a general blood condition than of a local infection.

Treatment.—Internally, sodium salicylate and the alkalis were given. For local application, a salicylic acid and sulphur mixture, in an ointment, was first prescribed, but this was replaced later by a salicylic and tar preparation, together with calamine lotion. Improvement has been slow but continuous, and the early and complete disappearance of the lesions is apparently certain.



Psoriasis lichenodes, showing hyperkeratosis, edema of rete and cellular infiltration in corium (from inguinal lesion) (moderate magnification).

Case 2.—C. M., male, single, draughtsman, aged 23 years. This patient, who was referred to me by Dr. A. Freymann, was a native of Italy, but had resided in Kansas City for the past eleven years. The cutaneous history of the family was negative. The patient's health had always been good. There was no history of tuberculosis in the family so far as he or his parents knew.

The disease from which relief was sought had appeared about three years prior to the time of consultation. The lesions, which began as small, reddish papules, and gradually increased in size until they were 5 cm. or more in diameter, were rounded or oval in outline, slightly elevated, and pinkish or violaceous in color, and were located in the inguinal regions. In the course of a few months others developed on various parts of the trunk, face and limbs. The distribution was roughly symmetrical, and the affected areas were lichenoid in character, free from scales, or only slightly scaly, and gave rise to no subjective symptoms whatever. There was considerable underlying infiltration. The patches were sharply outlined. The mucous surfaces had never been involved. On examination, the patient was found to be a well-nourished but rather slightly built individual, 5 feet 7 inches tall, and weighing 131 pounds. There was a slight reaction—1.2° F.—to tuberculin by injection, with no perceptible change in the lesions. A Wassermann serum test, performed by Prof. W. K. Trimble, gave a negative result. Blood and urine analyses, made on three different occasions, revealed nothing abnormal. The affected areas were situated mostly on the trunk, although there were three patches, circular in outline, on the face, two being in the right inferior maxillary region and the other just in front of the left ear, a few irregularly distributed lesions on the arms and a half dozen or more on the lower limbs.

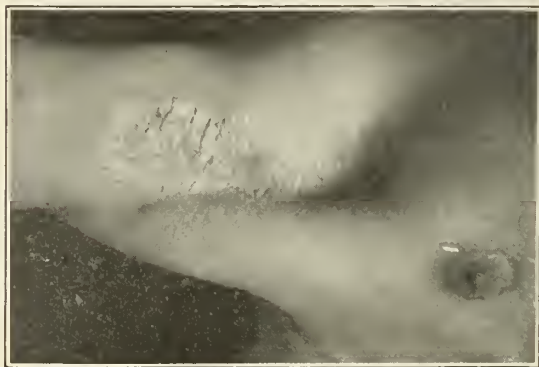
There was no predilection shown for the extensor surface of the elbows or knees. The finger-nails, particularly those on the left hand, were involved, the changes present closely resembling those in one of

Brocq's¹⁶ cases of parapsoriasis. The palms were unaffected, however, and the scalp was also free from the disease. In the inguinal regions the patches had merged to some extent, the result being a large, butterfly-shaped area of affected skin, studded here and there by a small island of normal integument. The last-mentioned feature was much more pronounced later, after the case had been under treatment for several weeks. In addition to the large, irregularly shaped patch on the lower abdomen, there were a number of small, circular or oval satellite lesions in this locality. There was an oblong, slightly scaly area in the left axilla, which was less infiltrated and much lighter in color than the lesions on other parts of the body. The patches on the cheeks were rather scaly at first, the exfoliating epidermis being quite tightly adherent. When the scales, which were large and a dirty grey in color, were forcibly removed, however, no bleeding followed. On the body and limbs the follicles were more prominent than usual, but no horny plugs or other suggestive abnormalities, were to be found.

For laboratory purposes four pieces of skin were excised, two from the affected area in the left groin, one from a small and typical lesion near the umbilicus and one from the patch in the left axilla. The material was fixed in formalin solution, dehydrated and two of the specimens blocked in celloidin and two in paraffin. For staining purposes, methylene blue (Unna-Pappenheim), hematoxylin, hematoxylineosin, Weigert's combination and Gram-Weigert mixture were employed.

The two pieces of tissue from the inguinal region and the one from near the umbilicus showed practically identical changes. The one from the axilla will be described separately.

The alterations were most pronounced in the epidermis and in the upper corium. The stratum corneum, which was somewhat thickened, was so dense as to appear almost homogeneous throughout its greater depth, only a slight overlying scale occasionally being observed. Small accumulations of epithelial debris marked the site of the interpapillary depressions. The granular layer was only fairly preserved.



Psoriasis lichenodes, lesion in left axilla [photograph made from reversed plate.—Ed.].

The prickle layer was considerably thickened, the increase in depth being apparently due more to the presence of a wide-spread intercellular and intracellular edema than to an actual increase of epithelial elements. The accumulation of fluid was greatest at the lower levels, gradually decreasing as the stratum granulosum was reached. The cells stained fairly well under the circumstances. The edema involved not only the intercellular spaces and the cells themselves, but also many of the nuclei. No leukocytes were found in the epidermis. The disposition of the cells comprising the

16. *Traité Elementaire de Dermatologie Pratique*, vol. II, p. 381, fig. 329.

basal layer of the rete was less regular than normal, although the erratic arrangement and peculiar tinctorial reactions that were such conspicuous features in the xantho-erythrodermia perstans sections were entirely lacking.

In the corium, the most noticeable change was the dilatation of the blood-vessels, particularly in the papillary region. The papillae were increased in height and appeared swollen and edematous. While no proliferative endothelial changes could be found in the corial capillaries, perivascular infiltration, mostly small cell, was constant throughout the upper cutis. The edema was greatest in the neighborhood of the vessels and was sufficient to not only increase the size of the spaces separating the bundles of connective tissue, but also materially affected both the contour and the staining qualities of the collagenous substance itself. In the papillary region the elastic fibers stained poorly and unevenly, and had a swollen, "fuzzy" appearance. There was no fragmentation, however, and the tissue seemed to be normal in amount. Deep in the cutis the elastin appeared to be unaffected.

In the specimen from the axillary region the corneous layer was not so thick nor so tightly attached as in other sections, although the homogeneous appearance and the almost inappreciable degree of scale formation were present here also. The stratum granulosum was diminished in thickness at some points and altogether absent at others, as in the previous specimens. The prickle layer also was diminished in thickness, in places being only two or three cells deep. Edema was a prominent and constant feature. In some instances the nuclear spaces were so dilated that the nuclei appeared to be lying free in the cavities. The intercellular channels were greatly expanded. The process of infiltration must have been very gradual, inasmuch as few of the prickles were broken, although the majority were stretched to their fullest capacity. The nuclei were little affected. In two instances leukocytes were found within distended rete cells. The basal layer was less regular than in the preceding specimens, although the cells stained evenly and fairly well. Many were enormously distended, however, and a few had lost their nuclei. The papillae were much more slender than in the inguinal sections, although fully as tall. Perivascular infiltration was a prominent feature throughout the upper corium. There was pronounced edema of the fibrous stroma. Both collagen and elastic tissue reacted to the various dyes in a manner similar to that observed in the earlier sections, and the changes present were evidently practically identical.

Treatment.—Internally, arsenic and salicin have been given. Locally, salicylic acid, tar, chrysarobin, pyrogallol and Pusey's carbon dioxide snow have been employed. On the smaller lesions, the snow, applied with moderate pressure, for periods of twenty seconds, proved quite efficacious. The larger patches did not respond so well, although a certain degree of improvement was manifested. It was not convenient for the patient to come frequently to the office, consequently the Röntgen rays have not been tried.

At this time, eight months having elapsed since treatment was first instituted, the patient's condition, from a cutaneous viewpoint, is about 40 per cent. better than when I first saw the case.

While the disease represented by Case 2 undoubtedly belongs in the group of chronic resistant scaly dermatoses, its exact position is a matter of doubt. Its symptomatology does not conform with that of either parakeratosis variegata or parapsoriasis lichenoides, although there is some resemblance to both Neisser's lichenoid eruption and Jadassohn's psoriasisform and li-

chenoid exanthem. Probably the best and simplest plan would be to group this affection, together with Neisser's and Jadassohn's, and the condition described by Juliusberg, under one name. The most appropriate designation, and one which, I am informed by Dr. Achilles Rose, one of our foremost medical onomatologists, will combine the descriptive meaning of psoriasis-like, lichenoid and dermatitis, is "psoriasis lichenodes."

I cannot accept Anthony's¹⁷ conclusion that the progressive pigmentary dermatosis first described by Schamberg,¹⁸ and later by Little,¹⁹ simply represents an early stage of xantho-erythrodermia perstans. "Cayenne pepper-like" petechiae have never been noted in Crocker's disease; in fact, taking into consideration the histopathology of the affection their presence would be somewhat of an anomaly. The infiltration in the vicinity of the coil-gland ducts which was so conspicuous a feature in Schamberg's sections was totally absent in both Pernet's and my own specimens. The pigmentation in Schamberg's disease might more properly be called a post-dermatitic dyschromia than a xantho-erythrodermia.

The only other condition with which I am familiar that might enter into a consideration of the chronic resistant scaly inflammations of the skin is the so-called premycotic dermatitis. I have had opportunity to study but two cases of mycosis fungoides at this stage, but judging from the reports of other observers, as well as from the findings in these two instances, I must agree with Chas. J. White,²⁰ that pruritus, a symptom which is almost or totally absent in erythrodermie pityriasque en plaques disseminees and allied conditions, is practically always a distressing and persistent factor in the earlier stages of mycosis fungoides. A second valuable, although less constant, diagnostic feature in this disease is the deep-seated character of the cellular infiltration. The histologic changes, while not invariably characteristic in the earlier stages, are usually sufficiently distinctive to form a corroborative link in the chain of diagnostic evidence. The fact that this disorder, at its beginning, occasionally bears some clinical resemblance to the diseases under discussion is not of sufficient weight to permit of its inclusion in the group, despite the rather elastic character of the essential clinical and histologic requirements.

CONCLUSIONS

There are certain cutaneous disorders which combine in greater or lesser degree the clinical characteristics of seborrheic dermatitis, psoriasis and lichen planus. For the sake of brevity, it

17. Report of a Case of Parakeratosis Variegata, *Jour. of Cut. Dis.*, 1906, p. 455.

18. A Peculiar Progressive Pigmentary Disease of the Skin, *Brit. Jour. Derm.*, 1901, p. 1.

19. Case Report, *Brit. Jour. Derm.*, 1902, p. 266.

20. Erythrodermie pityriasque en plaques disseminees, *Jour. Cut. Dis.*, 1903, p. 153.

would be well to class all of these conditions under the general heading of the chronic resistant macular and maculopapular scaly erythrodermias. From a strictly scientific viewpoint, however, it is probably best to separate the various conditions into groups, placing in each group only those disorders which bear a close clinical and histopathological resemblance to each other.

At the bottom of the list may be placed Crocker's xantho-erythroderma perstans, and at the top, the parakeratosis variegata of Unna. Santi and Pollitzer, with Brocq's parapsoriasis group, and psoriasis lichenodes, in which is included Neisser's lichenoid eruption, Jadassohn's psoriasisform and lichenoid exanthem and nodular psoriasisform dermatitis, Juliusberg's pityriasis lichenodes chronica and the condition exemplified in Case 2, here reported, intervening.

While this arrangement may be open to criticism, in view of the fact that our knowledge of several, in fact of all the conditions is more or less incomplete, it is only by the adoption of a comprehensive classification that the science of dermatology will be advanced. The charge is often made that we already recognize too many affections of the skin. If the diseases exist, it is our duty to familiarize ourselves with their symptomatology, and not dodge a professional responsibility by converting well-defined clinical entities into ragged and embarrassing scrap-heaps.

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THE PHTHALEIN TEST FOR RENAL FUNCTION WITH RELATION TO OPERATIVE PROCEDURES *

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After presenting a short historical review of the various methods which have been utilized in the determination of renal function, Dr. Davis and I will briefly present our results with phenol-sulphonaphthalein in the determination of the renal function in various types of renal disease which have come under our observation in the past few years.

In basing conclusions as to the value of any method in estimating disease processes, it is always essential to have as a comparison the results of the method under normal conditions. In this paper we will use as our standard that set by Rowntree and Geraghty, and that which we have determined on the routine cases at the Mullanphy Hospital.

In the face of any operative procedure, the most important function to determine is that of the kidney, whether the operation is to be directed to the urinary apparatus itself, or to any of the other organs, and every thorough and conscientious surgeon will endeavor to the best of his ability to know as far as is possible, the condition of the kidneys before intervention. This is ordinarily done by a chemical and microscopical examination of the urine and in most cases this is as far as the examination goes; but such examinations are often fallacious in that they frequently do not demonstrate the extent of renal disturbance. It is on this account that various tests for renal function have been proposed. One of the first observations of the alteration of the kidney secretion in disease was made by Hahn, who noticed the absence of the odor of violets in gouty patients after the ingestion of turpentine, and by Rayer, who noticed the

*Read before the St. Louis Medical Society, May 13, 1913.

NOTE.—The summary of functional tests is taken in part from an abstract of the excellent work of Rowntree and Geraghty, Jour. Pharmacology and Experimental Therapeutics, July, 1910.

absence of the peculiar odor of the urine in the patients who were suffering from nephritis after they had eaten asparagus.

Following this the elimination of various drugs, such as iodids and mercury, were studied, but very little was accomplished until 1897, when Achard and Castaigne introduced methylene blue. For some time the test was used quite frequently, but in recent years it has been discarded, as it possesses so many disadvantages. The dye is altered in the system and excreted as a chromogen, only 50 per cent. being normally excreted in the urine. It is slow in appearing and extremely slow in disappearing, requiring in some instances several days for the total elimination; it is generally influenced by the color of the urine and it is not well adapted to colorimetric methods. Indigo-carmin, first used by Voelcker and Joseph for testing renal function, possesses the same disadvantages as methylene blue and is quite unreliable, only 25 per cent. being excreted by the urine.

Rosaniline, first introduced by Dreyfus, has never enjoyed any degree of popularity. It also possesses the disadvantages of the above described, except that from 60 to 95 per cent. is excreted by the urine.

The above drugs have never been of any value in acute or chronic parenchymatous nephritis; in chronic intestinal nephritis, however, they have shown a delay in their time of appearance and the time of total elimination has been prolonged.

In 1897 Koryani introduced cryoscopy as a method of testing renal function. This method is very accurate for determining the solid excretion, but it entails complex procedures and is so influenced by diet, water, etc., that no assistance can be gained from the study of the urine alone.

The electrical conductivity of the urine, first used by Dawson Turner, has never been in general use, as it is a very complicated procedure, and the instruments necessary for its application are so expensive that it is far beyond the grasp of the ordinary physician. It deals with the mineral content of the urine and is naturally influenced by water and diet.

The test which has been of most value in determining the functional capacity of the kidneys is the phloridzin test. The property of phloridzin in producing a glycosuria without hyperglycemia was first discovered by Von Mering and put into practical application by Klemperer in 1896. The latter found an absence or marked diminution of the glycosuria in various renal disorders. The test has been the most useful one and the most satisfactory, but of late has fallen into disfavor among many, owing to the unreliable results it has furnished. Keyes, Jr., reports several cases where it has been totally misleading, and says the factors which are credited to its favor may be theoretical, but do not appear in actual practice.

Walker reports cases where no glycosuria occurred when the drug was injected into patients with perfectly normal kidneys. The test is very sensitive and often furnishes an exaggerated idea of the extent of the lesion.

The polyuria test introduced by Albarran in 1904, and reported later by Keyes, Jr., in 1910, has been quite a valuable test, as it has shown what the others have not — a reserve force of the kidneys. It established the fact that the function of a diseased kidney is more uniform than that of a healthy one and varies less from one moment to another the more extensively the parenchyma is destroyed; that when additional work is forced on the kidneys the response is more marked on the healthy than on the diseased side. The test is, however, not always satisfactory, as it is often not possible to produce a polyuria even after the ingestion of large quantities of water; as the polyuria may be present on the diseased side before the application of the test, and finally, the length of time for its application is too long.

Recently, many observers have been working with lactose and chlorids as methods for the determination of renal function. The lactose test advocated by Schlayer as representing an index of the vascular function of the kidneys, consists in the intravenous administration of two grams of lactose, and at the end of four hours studying the urine at hour intervals for the presence of sugar. Normally, the sugar disappears in about six hours, whereas in disease it is delayed. The test is extremely sensitive and for diagnostic importance it is very valuable, but as a means of prognosis it bears no importance.

The recent work of Rowntree, Fitz and Geraghty on renal congestion shows that with the slightest grade of congestion, this drug shows evidence of renal impairment in a kidney which is capable of complete restoration of function. Lactose was considered by DeBonis to be excreted by the glomeruli, and was first used as an indication of glomerular function, but it has been shown that it also is excreted by the tubules.

The chlorid test consists in the administration of five grams of sodium chlorid by mouth after a previous estimation of total chlorids has been established with a patient on an ordinary diet.

In normal cases, within twelve hours an amount of sodium chlorid should be recovered practically equal to that administered. If not, there is a delay in excretion. Depending on the amount and character of urine-bearing salt, the type of hyposthenuria can be determined. It has been shown that in various types of renal disease the salt secretion has been delayed. None of the previous tests has been entirely satisfactory.

Since the introduction of phenolsulphonephthalein in 1910 it appears that we have in conjunction with other clinical observations a test

which is almost universally proved to be more satisfactory than any of the others.

This dye seems to show a constant excretion in normal cases, a diminution of excretion in various types of renal surgical diseases, also, according to many authors, in various forms of nephritis. It is also capable of demonstrating a reserve force of the kidneys. It has been demonstrated to be non-toxic, non-irritating; it is simple of technic, rapid in its time of appearance and in its total elimination. It is uninfluenced by the amount of urine, urinary pigments, or blood, and it is almost entirely excreted through the urine. In other words, it seems to be an ideal test for the determination of renal function.

The drug may be administered hypodermatically, intramuscularly or intravenously. By the latter methods the time of appearance and total elimination is markedly lessened. In our tests, we have, for the most part, administered it subcutaneously in 6-mm. doses. The time of appearance in normal cases ranges from five to eleven minutes. The first hour secretion, 40 to 60 per cent., and the second hour, 20 to 30 per cent. This shows that the normal kidney eliminates a larger proportion of the dye the first hour. Later observations have shown that one-half hour collections, or for two periods, is all that is required, as this will show the corresponding ratio of health and disease.

The technic of the test after administration of the dye depends on whether the estimation of total function is desired or that of each kidney separately. In either case, the urine is collected at hour intervals or half-hour intervals, as is desired, for two successive periods, and put into separate bottles. The specimen is then read colorimetrically against a standard solution, and the percentage of excretion of the dye is in this manner determined. We will now append the results of the cases which we have studied:

A review of the twenty-five cases of obstruction at the vesical neck shows the great value of phenolsulphonephthalein in revealing the true nature of renal activity. In none of the cases did the test show a normal output if the patient was uremic or displayed evidences of renal inadequacy. In the two cases in which the test showed a marked delay in the time of appearance and a great diminution of the total excretion (Cases 6 and 12) death occurred within a short time, without operation, from uremia.

In the cases presenting high residual urines, even though the chemical and microscopical examination of the urine and the total quantity showed nothing abnormal, the test has invariably shown a delay in the time of appearance, diminution of total excretion, and in every case but one an inverse ratio of the amount excreted in the two periods. In other words, it showed that the kidney reserve force was lacking. Those of the cases which bore a high residual urine, and

which had not been previously catheterized, showed on the first test diminished renal capacity, after a course of preliminary drainage, the time of appearance was lessened and the amount of total excretion increased. In none of the cases which showed a safe phthalein output prior to operation was there any suggestion of post-operative uremia.

The conclusion to be drawn is that the phenolsulphonephthalein brings out evidences of renal insufficiency when other analyses fail, and that it shows almost invariably a deficiency in cases of protracted obstructions with high residual urine and that it offers us an excellent means of determining when the patient is in a condition to stand operation.

Renal Calculus.—In the ten cases of renal calculus which have been studied, this test has shown a slight delay in the time of appearance and also a slight diminution in the amount of total excretion from the calculous kidney as compared with the normal. The diminution, however, has in no case been marked, except in two cases of calculus pyonephrosis, in which instances the diseased kidney showed practically no excretion of the dye and the normal kidney put out an amount equal to that of the combined output of normal cases, showing compensatory hypertrophy of the normal kidney. In none of the cases in which the dye presented normal excretion was there the slightest evidence of renal inefficiency following operation.

Renal Tuberculosis.—We have studied fourteen cases of renal tuberculosis. Of these fourteen cases, we note first a deplorable fact, that is that five came to us with bilateral disease. It is not in the realm of this paper to discuss the clinical features of the disease, but it is urged that the practitioner should have his intractable cases of cystitis observed cystoscopically much earlier than they are.

In general, it may be stated that the test has demonstrated greater reduction of output in cases of unilateral tuberculosis than in stone cases. The greater the amount of renal destruction as determined postoperatively, the more marked the diminution of the excretion of the dye; the dye running parallel with the amount of renal destruction. In several cases in which the urinalysis showed the quality of the urine to be practically the same from the two sides, as far as specific and urea gravity were concerned, the test showed a marked depression on the diseased side.

In cases of double renal tuberculosis there has been quite a diminution in the amount of the dye excreted, and in none of the cases did it exceed 35 per cent. from the two sides for two hours. In none of the cases in which the test showed a good capacity was there any uremia following operation. In two of the cases of bilateral renal and genital tuberculosis, in which

the output was very low, death ensued within a few months without operation.

Case No. 5, left renal tuberculosis, showed on the first ureter catheterization the supposedly normal kidney to be eliminating but 10 per cent. of the dye in two hours, the diseased side 8 per cent. In this case the time of appearance was within normal limits in the supposedly normal side, whereas it was markedly delayed in the diseased side. Three days later second catheterization showed the time of appearance to be four and a half minutes, instead of eleven minutes. The first half-hour output was 21 per cent., second half-hour output, 16 per cent., in the normal side, whereas the diseased side was about the same as before. The patient showed no evidences of uremia following operation.

There have been two cases in this series in which the test was given to estimate the function of the remaining kidney, the other having been previously removed for tuberculosis, in order to determine the comparative excretion of the healthy kidney before and after operation. Case 1, one year after nephrectomy, patient clinically in good condition, time of appearance was fourteen minutes. First half-hour, 16 per cent.; second half-hour, 13 per cent., or 29 per cent. for the first hour, against 19 per cent. before operation. Case 2, left renal tuberculosis, in which the test showed, before operation, the time of appearance on the right side in five minutes. For the first half-hour 10 per cent.; second half-hour, 16 per cent. On the left side, the time of appearance was ten minutes. First half-hour, 9 per cent.; second half-hour, 12 per cent. Three weeks after nephrectomy, the time of appearance was seven minutes; first half-hour, 5 per cent.; second half-hour, 7 per cent., showing a marked diminution of excretion. Patient was, however, in good shape. Two months later another test gave time of appearance five minutes; first half-hour, 25 per cent.; second half-hour, 15 per cent. This case is very instructive. Following the operation, we note a drop in the excretion, which evidently means that the kidney has not had time to readjust itself. Two months later the amount of excretion had markedly increased, and was practically equal to that of the two kidneys before operation.

We have studied two cases of renal tuberculosis affecting the remaining kidney. In one case there had been a nephrectomy for unilateral renal tuberculosis five years previously; in the other case one year previously. The patient who had had the kidney removed five years ago and who was clinically in good shape, suffered a slight vesical distress, the excretion of the dye was good, appearing in six minutes with 30 per cent. for the first hour. This patient had improved considerably on proper hygiene and tuberculin and topical applications to the bladder. The other case, who was not clinically in good con-

dition, showed a delay in the time of appearance and 21 per cent. for the first hour. She is gradually going down hill and resists treatment.

In six cases of pyonephrosis, three were back of ureter strictures, two back of ureteral calculus and one a double pyonephrosis, evidently of hematogenous origin.

In the cases of unilateral pyonephrosis, the pyonephrotic kidneys showed either no excretion at all or a marked diminution, with one exception, Case No. 24, an old woman, 69 years of age, with a small stone in the lower ureter. Both sides showed about the same output, both being reduced. The stone passed after ureter catheterization and injections with oil. Patient has been well two years.

In the other cases of unilateral disease the normal kidneys excreted an increased amount of the dye, and in no case was there any uremia following operation. Case No. 20, which put out 29 per cent. in two hours before operation, showed a 48 per cent. excretion for one hour shortly afterward. The cases of double pyonephrosis showed a marked diminution of excretion.

Pyelitis.—In the eleven cases of pyelitis there has been practically a normal time of appearance and of total excretion, and in cases of double pyelitis the two sides excreted practically the same amount of dye.

Three cases of hypernephroma with metastases showed a normal time of appearance, normal amount of excretion, the two sides being equal.

Two cases of floating kidney showed normal outputs. One of the cases showed in the first analysis a marked diminution from both kidneys. Four days later the test was given and proved to be normal, similar to Case No. 5 of tuberculosis. There were three cases of hydronephrosis, two being large and one mild. The two large hydronephroses showed marked diminution of excretion and a compensatory hypertrophy of the normal kidney, whereas the mild hydronephrosis showed but a few per cent. of diminution.

This drug has been employed as a routine measure in all cases at the Mullanphy Hospital under Dr. Carson's service and also the genito-urinary service, and on many cases of diagnosed kidney lesions on the medical service in the last year and a half. The series comprises 147 cases, in which the test has not only proven of great diagnostic value, but also as an aid in prognosis, for in several renal cases where no uremic symptoms had shown themselves the coma was foretold by the extreme low test.

In sixteen cases, where a severe renal lesion had been previously diagnosed from the urinalysis and clinical examination, the test was below 45 per cent. in all, and below 20 per cent. in eleven of them, while the time of appearance of the dye in the urine was from eight to thirty-five minutes; the blood-pressure was high in every case, from 170 to 240. In two of these

cases, three separate tests were done at intervals of three weeks, and although they apparently were improving, the amount of albumin getting less and condition getting better, the test remained low; in one case from 23 to 29 per cent. That the test was of prognostic value was shown by both dying in a few weeks, the autopsy showing a severe interstitial nephritis of both kidneys.

The test was made on patients who were uremic; in three of these the time of appearance was over one hour, and the two-hour output from 8 to 14 per cent., while in the fourth case the color did not appear for two and one-half hours. All four cases died within five days.

As a routine measure in every surgical case, except in children, it has been of decided advantage in telling the surgeon just how efficient the kidneys were and if they were capable of standing operative procedures. For instance, in one case of large ovarian cyst, the systolic pressure was 200 and the diastolic 86, the urinalysis negative; the test was only 44 per cent., just inside the safety line for operation. Two days after operation (removal of an immense cyst) a second test was made, in which the color appeared in thirteen minutes, with a two-hour percentage of 73 per cent., while the systolic pressure had fallen to 160, diastolic 90.

A case of inoperable carcinoma of the prostate and bladder had five separate tests made, none above 27 per cent., while the urinalysis showed only a few casts as long as the retained catheter was in place, yet he became profoundly uremic if it was necessary to leave the catheter out for forty-eight hours and catheterize every four hours.

Eight of the cases having kidney lesions along with other more or less important lesions, have gone to autopsy and the test has agreed perfectly with the findings, while in three of them the clinical examination had not revealed any kidney lesion of importance until the test was made.

Does a high blood-pressure with albumin and casts indicate kidneys so badly affected that it is dangerous to operate? Not in all cases; as in thirty-eight cases the pressure was above 150 and the urinalysis showed casts in quite large numbers, yet the test was high enough to warrant operative interference safely, and in no case was there any death from kidney insufficiency. A low pressure, from 90 to 10 with a like urinalysis, is not always a dangerous combination to operate under, as the test was good in nineteen such cases; in two excellent—from 83 to 86 per cent.

We have had six cases come in for operation in which a careful examination had not indicated anything at fault in the kidneys, yet the test was so low that a general anesthetic was not used. Three of these cases came back to the hospital and died of renal lesions in from five to

eight months; the other three gave such low tests that they were never considered safe risks and all died; one of carcinoma of stomach, one carcinoma of the gall-bladder and one T. B. peritonitis.

In 124 of the cases a complete blood examination, urinalysis and blood-pressure, together with a careful physical examination, was made, and the test has proven of such value that the question of whether to operate or not has hinged on it alone in many of them.

A close scrutiny of our results demonstrates that this dye has been exceedingly satisfactory and accurate in revealing the true nature of renal efficiency, and that it has borne out the claims that Geraghty and Rowntree made when they proposed it. The only two exceptions that we have had were in Case No. 5 of tuberculosis and Case No. 3 of floating kidney, in which on the first test there was demonstrated marked inefficiency of the supposed normal kidney in each case, whereas several days later it showed the excretion to be normal.

This bears out the work of Albarran and Kapsammer, that under normal conditions the amount of work done by the kidneys varies from time to time, if the urine is collected for short periods. It teaches us, however, that if the kidney eliminates but a small amount of the dye we should not conclude in every case that it is functionally deficient, and the test should be repeated in order to determine if this diminution of excretion is constant.

Taking it all in all, we must agree with Geraghty, Rowntree, Keyes, Schmidt, Cabot and others, that in connection with clinical observations, this test has demonstrated itself as the most valuable test for renal function that has been proposed.

Humboldt Building.

PRIMARY CARCINOMA OF THE APPENDIX *

LOUIS RASSIEUR, M.D.
ST. LOUIS

The seeming infrequency of this disease, the difference of opinion that has arisen concerning the source of these tumors, their histologic structure, their prognosis, justify the presentation of this subject for your consideration.

While the efforts of the scientists to unravel the various points of the dispute to the present time have been unsuccessful, still they have served a grand purpose in that they have taught the surgeon who opens the abdomen, first, the importance of the clinical history; second, the value of always carefully looking at the appendix and its tributary lymphatic apparatus, no matter

* Read in the Surgical Section of the Missouri State Medical Association, at the Fifty-Sixth Annual Meeting, held at St. Louis, May 13, 14, 15, 1913.

what the occasion be for opening the abdomen; third, the necessity of a microscopic examination of all tissues removed during an operation.

Hammond, in an historical review of this condition, states that the first case was reported by Merlin in 1838; in 1865 Prien reported another; in 1867 Rokitansky described four cases of colloid tumor. Up to 1895 twelve cases had been reported and of this number only one had been histologically described.

In 1903 forty cases were collected. In 1908 the number of cases collected rose to 61. As to the frequency of this condition Kurak writes that he has had one case in 680 appendix operations. Neugebauer states that he has had three cases in 330 operations on the appendix. The youngest patient thus afflicted was a girl 8 years old; the oldest case was a patient 38 years old.

This disease is most frequent between the ages of 20 and 35 years. Some of the older writers would have us believe that this condition is more frequent in the female; the later writers, chief among them Lecerne, with better statistics, tell us that it is equally frequent in both sexes. The symptomatology is at present undetermined. Landau says that all cases, with the exception of the one reported by Beyer, were recognized first after the peritoneal cavity had been opened. Hartmann says in a recent article that no case to his knowledge has been diagnosed prior to operation. Letulle found one of his cases while making an ovariectomy.

My first case I found while operating for retroversion of the uterus. My second case I found while making an interim operation for recurrent appendicitis. All observers agree that sooner or later every case will make itself known by the picture of appendicitis. Concerning the etiology, Landau says that it is just as obscure as the cause of cancer in any other part of the body. Zaaier believes that the development of the cancer is preceded by many years of inflammation of the appendix. I believe, however, that if the latter were true we would see more cases of cancer of the appendix. Lecerne believes that they take their origin in scars of the appendix and make themselves known by acute appendicitis. Versé does not believe that the cancer is secondary to inflammation, because they have at different times been found when the operation was made for the first attack of appendicitis. Luzzatto, after a painstaking study of the histology of his cases, believes the cancer is primary and the symptoms of inflammation are secondary. At this point I wish to recall that many of the cases on record were discovered accidentally while the patient was being operated on for some pelvic condition, as was true in my first case.

Primary cancer of the appendix is usually located at the tip or within one centimeter from the tip of the appendix. Milner says that they vary in size from a pinhead to the size of a pea;

however, Lecerne reports one case the size of a walnut, and Luzzatto had one case as large as a Mandarin orange. Stieda says that the color of the tumor is yellow on cut surface. The latter was true in my two cases. The tumor leads to a narrowing and may even cause a circumscribed obliteration of the lumen of the appendix. The tumor may be nodular or diffuse. It is usually a carcinoma simplex. The stroma may be well developed, so well indeed that we have a picture of a scirrhus. The epithelial cells may be very abundant, forming nests of cancer cells between the lymph follicles and the gelatinous glands, presenting an alveolar or tubo-alveolar arrangement. These cancer proliferations may infiltrate all the tunics of the appendix down to the serosa, and recently Versé reported three cases with infiltrations of the mesentery and one case with hemorrhagic metastases of the regional lymphatics. Milner, after a careful microscopic study of the cases which he met with, came to the conclusion that these cases are really not cancers but inflammatory tumors taking their origin in a proliferation of the adenoid tissue of the mucosa and of the endothelium of the lymph-vessels and lymph-spaces. However, this view has met much learned opposition. Marchand, Dietrich and others have reiterated that these tumors are true cancers. Recently Voelckler reported a case that died from a recurrence, whom he had operated on two years and seven months before death. The rule is, however, that these tumors make no metastases and are not followed by recurrence. Aschoff said that they bore the same relation to cancer elsewhere of the mucosa as does the nevus to the melanoma of the skin. While at the present writing there are some who doubt, still it is the consensus of opinion that these tumors are true cancers which make few symptoms and no metastases, and when once removed are seldom followed by a recurrence. I have met with two cases in about six hundred operations on the appendix. My first case was a married woman 33 years old. She had the symptoms of an old salpingitis and retroversion of the uterus. Ten years ago she had an Alexander operation made on her round ligaments by Professor Doederlein. She gave no history of appendicitis. On March 10, 1911, I made a salpingectomy and a uterine fixation. It is my custom on opening the abdomen to examine all the viscera for conditions which might have escaped my notice during the clinical observation. While doing so in this instance I found a tumor on the end of the appendix one-half inch long. I removed the appendix and found that the lumen did not extend to the tip of the appendix on account of the presence of the tumor. The appendix was forwarded to the laboratory with the provisional diagnosis, inflammatory tumor of the appendix. Microscopic examination proved that the latter was a carcinoma involving all the tunics

to the serosa. The adjacent Lieberkuhn glands showed a mucous enteritis. There was no other inflammatory reaction. The tumor was a yellow color on cut section. Now two years and two months have elapsed and the patient presents no signs of recurrence. When removing the appendix, I removed no more mesentery than is done in any interval case. I do not recall having seen any enlarged lymph-nodes.

My second case was a single lady who was 31 years old. She complained that she felt nauseated at times. Meat did not agree with her. She was frequently constipated and had diarrhea very often. She had frequent attacks of pain in the region of the appendix. My diagnosis was chronic appendicitis. On Nov. 13, 1912, I made a laparotomy. I found the appendix coiled cochlea-like. There were many adhesions of the meso-appendix. There was no lymphatic involvement. The tip of the appendix was tense, distended, hard and presented a bean-like enlargement three-eighths inch in diameter. The appendix was removed. On incising the appendix the small tumor looked yellow. From that I made the diagnosis of primary carcinoma. The microscopic examination showed an alveolar carcinoma with a well-developed stroma involving all the tunics to the serosa. One-half year has elapsed since the operation; the patient is very healthy and shows no signs of recurrence.

After meditating over my cases I am impressed by the wisdom of the dictum first pronounced by Zaaier and later by Lecerne, that we should carefully examine every appendix and its mesentery which we contemplate to remove. Hartmann said that all appendices that have been removed should be examined microscopically. Stieda, in a more recent paper, expressed the same views. I fully agree with them, but would add that whenever the abdomen is opened the appendix and its mesentery should be examined. A microscopic study of my two cases shows the histologic structure of a true carcinoma. The clinical study shows in the one case an absence of the signs of appendicitis and in the other case the presence of those signs. Both cases attest their benign nature by an absence of a recurrence to date.

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 Metropolitan Building.

DISCUSSION

Dr. Ernst Jonas, St. Louis: The first publication of a proven case of carcinoma of the appendix appeared in 1882 (Beeger.) To this day this case is the only case in which the diagnosis was made before the operation. The greater increase in the number of cases recorded since then is the result of thoroughness in histological examinations, not only of appendices with visible and palpable nodules, but (in the large clinics, at least) of all appendices removed. If histological examinations of all removed appendices should become the rule the number of carcinomata of the appendix would, undoubtedly, be found to be still greater.

Among 2,336 cancers of the bowels reported by Claude Leichtebern and Nothnagel, there were only nine primary cancers of the appendix (0.39 per cent.), and among 6,050 cases of operations for appendicitis there were only twenty-eight cases (0.46 per cent.) of cancer of the appendix. Considering the great importance given inflammation as cause for cancer it would seem strange that the latter percentage is not much greater than the former. From statistics, however, it is evident that carcinoma of the appendix prefers the youthful age and is most frequent in the third decade of life, while all other cancers of the bowel are most frequent in the fifth and sixth decades.

Searching the many theories given, I believe inflammation in connection with embryonic disposition for cancer (Cohnheim-Borst) produces the first impulse toward the development of cancer.

The greater per cent. of cancer of the appendix found in the female (61.1 per cent.) is yet to be explained. Cancer of the appendix is usually only incidentally discovered—and women submit to abdominal operations more readily than men. (It would be very wrong to conclude from the before-mentioned percentage that appendicitis is more frequent in women. Just the opposite is the case.)

Most authors on this subject of primary carcinoma of the appendix argue that the clinical benignity of these tumors (cancers of the appendix) does not quite harmonize with the character of cancer and propose to call them carcinoid tumors. I agree with these authors that the definition of cancer demands clinical malignancy in addition to the characteristic picture of the tumor and infiltrating growth. This clinical malignancy expresses itself through recurrence and metastasis. Now, if we find among the cases published twelve cases (61.1 per cent.) of recurrence and metastasis, this number is by no means small and of no small significance, considering that "accompanying" inflammation gives indication for early removal of the appendix and incidental discovery of the cancer. These incidental discoveries should become rather intentional discoveries. They reveal more clearly than ever the importance of early removal of the inflamed appendix.

I wish to urge the careful examination of the appendix in all laparotomies; I wish to urge its removal whenever it shows change and even as a routine in pelvic operations; and in cases suspicious for cancer—the removal with it of a greater amount of its mesentery, in order to include the metastases usually observed close to the appendix, when present at all. The by no means small number of recurrences and metastases observed makes this procedure obligatory: my opinion in this is not in entire accord with that of the author of the paper. The practice of removing appendices and putting them forthwith in specimen jars is to be most strongly condemned. The appendix should be cut open immediately upon removal and thoroughly examined, macro- and microscopically.

Dr. T. J. Beattie, Kansas City: This brings up just two facts to my mind. I believe that there is no symptomatology of primary carcinoma of the appendix. I cannot conceive in my mind how one could diagnose the case as early as they have been reported, but it emphasize these two points:

Whenever you open the abdomen you should examine the appendix. Whenever you examine the appendix, if there is an inflammatory condition there, or a suspected disease of that appendix, it should not be examined macroscopically, but it should be examined microscopically and studied carefully. I have never happened to come in contact with a case of primary carcinoma of the appendix. It is possible that there would be more cases found and more cases reported if the surgeons would be more careful in their examination of the cases that come to them.

Dr. George Gellhorn, St. Louis: Carcinoma of the appendix is no longer an uncommon disease. Now that the attention has been directed to it the number of reports has increased rapidly. I, myself, have observed a case of carcinoma of the appendix which, however, presented a type different from the one shown by Dr. Rassieur. This carcinoma coexisted with a peculiar colloid degeneration of the peritoneum known as pseudomyxoma peritonei. In this condition enormous masses of gelatinous substance fill the abdomen and adhere closely to all peritoneal surfaces. The origin of this curious condition, which practically always leads to death, is still somewhat doubtful. In women it is supposed to be due to the rupture of ovarian cysts filled with gelatinous contents. In men, in whom it is less frequent, it has been considered to be either the cause or effect of a cancer of the appendix. In my own case of pseudomyxoma peritonei, that of a woman of 50-odd years, both etiologic factors were present: namely, a ruptured ovarian cyst and a cancer of the appendix. The latter had, on microscopic examination, adenomatous structure.

Dr. Rassieur: Dr. Kiefer, you stated that both your cases had involvement of the cecum?

Dr. Kiefer: Yes.

Dr. Rassieur: Of course, I don't think that quite tallies with the cases described. I don't see how you could tell where it started—very likely in the cecum—but these I am showing were truly primary carcinoma of the appendix. You say there is no definite proof, and, in fact, there is more definite proof that they were secondary cancers of the appendix, due to advancement by contact or continuity.

Dr. Kiefer: I stated they were not of scientific interest, in opening my remarks.

Dr. Rassieur: As to Dr. Jonas' remarks, I agree with him in every detail. He mentions in such cases to remove the entire mesentery of the appendix. Well, I didn't recognize my first case (I mentioned that in the history), and I did not remove any more mesentery than you would in an interval case, and still I had no recurrence, which speaks again for the benign nature of these cases.

Dr. Beattie speaks about the examination of the appendix on opening the abdomen, and if it is found diseased to take it out. I do not know whether you are justified in doing it but I think we ought to remove all appendices when we get the abdomen opened. You save them from an attack of appendicitis, or any pathologic condition which may arise from the appendix. It is so readily done, especially in a case where the appendix is normal, or presumed to be normal, and, of course, if diseased we take it out anyway.

One point which helped me, and I think may help you, in diagnosis, is that the tumor on cross section looks yellow. Suppose you remove the appendix, and you notice a small tumor, the size of a pinhead or a little larger (in one instance it was the size of a pinhead, in the other the size of a bean), hand it over to an assistant and let him cut it open. It may be carcinoma, as these two cases proved to be.

THE RELATION OF REFRACTION TO THE PRACTICE OF MEDICINE*

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The subject of refraction and its relation to the practice of medicine has received considerable thought and some discussion among ophthalmologists, but on making some investigations I find, so far as I can learn, that the subject has been but little discussed by or before the general practitioner of medicine.

In view of the fact that the optometrist, the so-called ophthalmologist and the eyesight specialist, who have no medical training whatever, and from motives wholly mercenary, are making strenuous efforts to have a law enacted in this state by which they may have legal authority to practice in this department of medical science and art, and by this "short cut" be placed on an equal standing with the best ophthalmic surgeons, I deem it an opportune time to consider this subject in its true significance.

I am well aware of the fact that the discussion of any subject connected with ophthalmology is uninteresting to a majority of the doctors who do surgery or general practice. Some have gone so far as to suggest that ophthalmology ought to be divorced, so to speak, from general medicine, as dentistry is at the present time. I am glad that this idea has about become obsolete. This thought has arisen from the defects of our medical training in that it lacked proper and sufficient instruction on ophthalmology in our medical colleges.

This superficial and incorrect view cannot be held, but will be entirely changed if we but take a glance at the great mass of clinical facts, columns of pathological details, array of instruments of mathematical precision for measurements and the discovery of normal and diseased conditions, together with the hosts of illustrious names of those who have brought out of chaos the hidden mysteries of this department of medicine. Among these illustrious names are found those of Mackenzie, Desmarres, Helmholtz, Graefe, Donders, Bowman, Stellwag, Jaeger, Arlt, Robertson, Williams, Agnew, Noyes, Norris, Hughlings Jackson, Allbutt, Haab, Landolt, Nettleship, Swansy and a host of others. These have produced in ophthalmic science the highest development of medical science, and in ophthalmic practice the highest and most exact application of medical art known at the present day.

The literature of ophthalmology will compare favorably in volume and extent with any other department of medicine or surgery, and in scientific exactness outstrips all other departments of medical science.

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Notwithstanding these facts which are manifest to all, Alvin A. Hubbell, chairman of the Section of Ophthalmology of the American Medical Association in 1909, said: "A most humiliating fact in medicine to-day is that ophthalmology, one of its most important branches, is regarded too indifferently by many medical faculties." In general practice how often do we find the physician self-condemned by his own words: "I do not pretend to know much about the eyes."

If this be the case in the general subject of ophthalmology, how much more do we find both indifference and lack of information in reference to the subject of refraction.

This subject may not be at all interesting to the general practitioner, yet it involves a principle which is of vital interest to the welfare of his profession. He is not interested because he has little or no practical knowledge of the subject. He has not this knowledge because the college from which he graduated did not teach it or require a knowledge of it before granting diplomas to its graduates. There are so many other things seemingly of more importance to him that he cannot afford the time and expense necessary to acquire a knowledge of the subject.

In view of the fact that the majority of our medical colleges have failed to impress on the mind of their graduates that it is essential that the medical student before graduating should acquire at least a theoretical knowledge of refraction, the majority of these graduates naturally regard this subject as not belonging to the field of medicine at all and that it can be done by the laymen as well as by the oculist who has been trained to do his work in a scientific manner.

According to public opinion, glass-fitting has no relation to medicine whatever. This opinion has been formed from two contributing causes: First, the confessed ignorance of the subject by the general practitioner and his reference of those who need refraction, too often, to the optician; second, from the fact that outside of that done by the oculist it has been almost exclusively in the hands of the laymen, who know little or nothing of its relation to medicine, nothing of the anatomical defects of the eye which give rise to the necessity for glasses, or the significance of these defects in relation to the general nervous system.

The crude methods formerly used by those who fitted the eyes with glasses had a tendency to exclude all thought of a relation between these methods and medicine or medical knowledge, which requires training and skill.

Now, if you will pardon this digression, I will say that this lack of providing proper training on the part of the medical colleges, the lack of training on the part of the medical student who has become a practicing physician, the leaving the practice of refraction wholly in the hands of un-

skilled laymen, afforded a splendid opportunity to the enterprising optician to usurp this remunerative field of medicine, and is now loudly and persistently calling for legal protection that he may continue to reap the rewards of his conquest and remain in safety in this domain of truly medical science.

Now, I affirm that refraction is not only related to medical science, but that it is a department of medicine that must and does take its place beside the other departments of medicine, as surgery, obstetrics, neurology, dermatology, and so on.

Why do I make this claim for refraction? First, from the fact that refraction involves a correction of anatomical defects of an organ of the human body, and which defects are often accompanied by pathological conditions and perverted physiological functions. Second, the correction of these defects, the recognition of the pathological conditions and restoring the organ to its normal function demand the skill of medical men who are familiar with the anatomy, physiology and pathology of these organs, together with their relations to the human body.

Now, since this paper was not written for the hearing or instruction of the oculist, I shall take the liberty to illustrate by stating simple conditions of refractive defects, and, by using these, make my meaning plain to be understood.

The emmetropic eye is the standard by which all eyes are judged in regard to their refraction. Any departure from this standard renders the refractive condition more or less defective.

The emmetropic eye may be regarded as "a perfect visual mechanism in which parallel rays of light are brought to a focus exactly on that part of the retina devoted to distinct vision when the eye is in a state of rest." It is doubtful if such a perfect eye ever exists.

Now a departure from this standard in a more or less degree constitutes what is called ametropia, in which the dioptric media do not perfectly focus the rays of light, passing through them, exactly on that part of the retina that gives best vision.

This defect is due to the anatomical structure of the eye. This defect may be such that the rays of light are focused after passing the retina. This form of ametropia is called hypermetropia or hyperopia.

Again, the rays of light may be focused before reaching the retina. This form is called myopia or near-sight. Part of the rays may be focused on the retina and part pass back of the retina before they are focused. This constitutes what is called hyperopic astigmatism. If part of the rays are focused on the retina and part before reaching the retina, it constitutes myopic astigmatism. There are other forms of refractive defects, such as compound and mixed astigmatism, but this will be sufficient.

Now, in hyperopia the visual axis of the eye is too short, and in myopia the visual axis is too long. In astigmatism the front of the eye, or cornea, is irregularly curved.

I contend that these conditions are due to anatomical defects in the structure of the eye, and are often accompanied by pathological conditions. In hyperopia there is congestion of the eyelids and conjunctiva, which may become aggravated into the formation of pustules along the margins of the lids, inflammation of the meibomian glands, forming cysts and hordeola.

There is hypertrophy of the internal recti muscles, the sclera becomes thickened and dense, the circular fibers of the ciliary muscle are hypertrophied, there is an increased flow of blood to the eye, the optic disk often exhibits a low grade of inflammation. The retina and chorioid are congested and sometimes become inflamed.

Myopia is due to changes in the structure of the eye that are pathological. Dr. James Moore Ball says: "Myopia is as truly a disease as tuberculosis. The most conducive conditions to its development are improper illumination and hyperopic astigmatism."

The pathology accompanying myopia is as follows: Atrophy of the pectinate ligament, the circular fibers of the ciliary muscles are greatly atrophied. The longitudinal fibers greatly hypertrophied and increase in length of eyeball. Often there is softening of the posterior part of the vitreous body and breaking down of its structure resulting in the formation of floating opacities. The retina may become detached and posterior staphyloma may occur. In extreme cases of myopia there may be chorioiditis, chorioidal and retinal hemorrhages, with detachment of the chorioid. In hyperopia of high degree we have the perverted function of the eye illustrated in hypertrophy of the fibers of the ciliary muscles, heterophoria. Spasms of the circular fibers of the muscle of accommodation with hypertrophy of the internal recti muscles due to overaction of these muscles, in accommodation and convergence, necessary to secure clear vision, the result often producing convergent strabismus. The eye must not be regarded simply as a separate organ, but as a highly specialized part of the whole body.

Every ophthalmologist and neurologist knows that the refractive defects have a varied influence on the eyes and the rest of the human organism. Their greatest manifestations are through the nervous system. I call attention to some of the more prominent nervous manifestations. These are pain, headache, photophobia, neuralgia, dizziness, confusion of mind, inability to concentrate thought, irritability, insomnia, hysteria, neurasthenia, hallucinations, general nervousness, chorea, indigestion, nausea, vomiting, epilepsy and insanity.

With the above anatomical defects, accompanied by the pathological conditions, together with the nervous manifestations present, I contend that these are sufficient to establish the fact beyond question that refraction is a part of the department of medicine. I further contend that it should only be attempted by those who are qualified to do so by being trained in medical schools with especial instructions on this most important field of medical science.

It is inconceivable that the so-called optometrist should be as capable of dealing with these delicate conditions of the human body as the trained doctor should be. Why any physician who prizes the honor of his profession should endorse this innovation in the field of medicine is difficult to understand, except on the theory that he does not regard refraction as belonging to medical science. I am led to believe that one reason why the general practitioner is indifferent is because he does not feel that the optician or optometrist encroaches on his practice in any way, and that the contention is wholly between the oculist and the optician. But when a law is enacted legalizing the practice of so-called optometry, and this inviting field in the domain of medicine is opened to this enterprising individual to treat the eyes by means of lenses and prisms, every street corner will be decorated with the flaming declaration of their great skill to cure every disease, from paralysis to blindness, from indigestion to cerebrospinal meningitis. The general practitioner will find he has a far more formidable competitor than he is now willing to admit.

If you feel that this is too strongly put, take a glance at the glaring claims of the leading optometrists of your own town and cities even now. If they lay claim to the cure of many diseases now, when there is probably a penalty for treating diseases without license to practice medicine, what will it be when their practice is legalized?

What is the remedy? Let every physician draw the line when a layman encroaches on the field of medicine, whether druggist, optician or optometrist. Let every physician, whether specialist or general practitioner, refuse to recognize the claim or practice of those who have no right to enter the field of medicine. Study refraction, if only to gain a theoretical knowledge of it. If you do this you will no more recommend the layman to do this than you would recommend a layman or laywoman to a friend or patient to do their obstetrical work. But you say this refraction is only a mechanical work to help a physiological condition. What more is obstetrics? It is mechanical. The head and body of the fetus guided through the straits of the pelvis, assisting the physiological efforts of the uterus to expel it at the end of gestation. No general practitioner is willing that the lay-

man or laywoman should have legal right to enter this field of medicine without first becoming qualified by the same means that you have used.

In conclusion, I affirm that refraction is a part of the field of medicine; that none but those who have studied medicine in a regular way, including refraction, should have legal right to practice this branch of medicine; that our medical colleges should teach refraction in a systematic way and require their graduates to pass satisfactory examinations on refraction before graduating. State medical examining boards should be required to give examinations on this branch of medical science before giving certificates of registration to practice medicine in the state.

Better facilities should be given by our larger medical schools and universities for a more thorough teaching of ophthalmology. More than a three- or six-months course in ophthalmology should be required of those who take up this field of medicine as a specialty. The optician should be limited to lens-making and frame-fitting, where he truly belongs, leaving the refractive work in the hands of the physician and specialist, who alone are competent to deal with this subject.

Woodruff Building.

THE ADVISABILITY OF PREMATRIMONIAL MEDICAL EXAMINATION FROM THE STANDPOINT OF THE CHURCH *

REV. W. V. BERG
PHILADELPHIA

It is with real appreciation of the honor which this society has conferred on me that I note from your program that you have asked me to speak from the standpoint of the church. This would indeed be a great and important task could any one minister speak with authority for so great a body as the church universal. It is, of course, obvious that I cannot speak for the great body of the church known as the "Roman Catholic," and on reflection it will be apparent at once that I cannot speak for that other great wing of the church known as the "Protestant"; nor can I even claim to speak for my own denomination, the Congregational, since this denomination glories in the independence of its individual ministers in local churches. I must, therefore, frankly confess that I speak to-night for myself, except in so far as that which I shall say may commend itself to the judgment and approval of the church at large.

The subject to-night is really a department of the science of eugenics. The science of the well-born is the newest of the sciences. It has

been nurtured in the visions of students and philanthropists, and has so far received hardly more than its christening. Yet what program could be more worthy and more ambitious than that which would give to the child yet unborn the rightful heritages of health, intellectual opportunity, and possible efficiency and happiness?

In relation to the marriage laws, the science of eugenics insists on the fundamental purity of sex relations; the abolition of transmissible diseases produced by sexual vice; the prohibition of marriage and marriage relations between the unfit, and, no less important, the encouragement of those who are more fit for parenthood to seek its opportunities and duties.

Ability, it has been said, is dying out at the top simply because it is not being born. On the other hand, many influences are at work to protect the weaker and poorer social stocks, thus keeping alive multitudes of weaklings. This cutting off at the top of the best and adding in at the bottom of the worst and poorest is exhausting the high qualities of our race at a time when the demands of the times and the complex conditions of living which we face are rising out of all proportion to the level of the national life which is coming into being.

We have not yet realized the extent of the danger which thus threatens us. The science of eugenics claims that "an ounce of prevention is worth a pound of cure." Davenport calls attention to the fact that if only one-half of 1 per cent. of the \$100,000,000 we spend annually in America in hospitals, insane asylums, almshouses and institutions for the feeble-minded, were spent on the study of the bad germ-plasm that makes necessary the expenditure, we might learn just how it is reproduced and the best way to diminish its further spread.

From the report of the Conference of Charities and Correction for 1912, although the figures are incomplete, the following statistics are gathered: There are over 15,000 inmates of institutions for the blind, deaf and dumb; over 20,000 inmates of institutions for the feeble-minded; over 187,000 in institutions for the insane; over 113,500 criminals; nearly 23,000 delinquent children, not including those on probation; about 84,000 paupers; about 269,000 occupants of eleemosynary institutions. Lest these figures should fail to convey their real significance, let me add that they indicate that fully 1 per cent., or ten out of every 1,000, of our present total population is in custody, is non-productive, and living at public expense. These facts ought to be sufficient to secure the most careful and respectful attention to the science of eugenics.

Accepting then as the two aims of eugenics, the elimination from the marriage contract of the inheritably unfit on the one hand, and on the other hand the encouragement of the union

* Read before the Medical Society of the City Hospital Alumni, St. Louis, Annual Public Meeting, May 1, 1913.

of the higher and better strains of human life, what, from the standpoint of the minister of the gospel, is the advisability of premarital medical examination?

Let it be said in the first place that such a requirement is by no means a panacea for all the social evils of the times. It may be doubted whether even a large percentage of the present evils will be reached by such a law, but if even a small percentage of preventative measures were insured, it would, in my judgment, be abundantly worth while to have such a law.

From the practical standpoint, the matter has been actually tried. The Very Rev. Walter T. Sumner, D.D., dean of the Episcopal Cathedral of SS. Peter and Paul, Chicago, announced that after Easter, 1912, no persons would be married by any clergyman at the cathedral except on the presentation of a certificate signed by a reputable physician, showing that the contracting parties are physically and mentally normal, and have neither an incurable nor communicable disease. This action has been heralded throughout the country by ministers and physicians alike in most commendatory terms, showing that there is at least a sentiment strongly in favor of attempting to enforce some such law, and that in the opinion of leading men in all parts of the country this position taken by Dr. Sumner is a step in the right direction.

It may be urged again that from the practical standpoint such a law would be impossible of execution. On the one hand it would require competent medical examination, which not every physician would be qualified to give. It would be an exceedingly difficult and technical matter to determine who are the fit and the unfit; whether the clean bill of health were to include only sexual diseases, or other diseases, such as tuberculosis and mental diseases; but this part of the discussion is to be in abler hands.

And again, the constitutionality of such a law may be questioned, as to whether or not it would be an interference with personal freedom were the state to pass laws restricting the marriage rights. To this it may only be said that the state already enforces certain laws regarding marriage. Missouri is one of the few states in the Union which still recognizes common-law marriage. Bills abolishing common-law marriage have been introduced for the last five sessions and have always met the same fate. A bill to prevent hasty marriages by requiring five days' notice between the application for and the issue of a marriage license was lost in the senate after passing the house. But in spite of these and other deficiencies in our marriage and divorce laws, the law at least requires that a license be procured and the age of applicants specified. However, the matter of the constitutionality of these laws is to be covered by the legislator who will speak later on this evening.

Coming back to the standpoint of the church in the matter of the practicality of such a law, it should be said first of all that no one minister alone could accomplish much good by announcing his determination to marry only such persons as present a clean bill of health. Were any minister single-handed to make such an announcement it might at once be misconstrued by members of his own parish. The only effective method is for the ministers to stand together—say at least of one denomination—preferably of all denominations.

Aside from the practical standpoint, there would seem to be only one other possible objection to a premarital medical examination, granted that this could be as completely effected as, for instance, the license for a chauffeur, and at least as efficient as a medical examination for an insurance policy. For it may yet be asked will the fact of such a general attitude on the part of the ministers of refusal to marry persons without a clean bill of health be responsible in the end for more harm than good? It may, on the one hand, be an encouragement to certain forms of vice which the proposed law seeks to eliminate. To this, one can only say that even if such were true to a limited extent, in the long run it would seem probable that more people would be helped. It would surely, to the average young man, prove a stimulus to right living if he knew that no marriage license would be issued except on his ability to pass a medical examination. It would place honor on those parties who, by law, were made legal candidates for marriage. It would insure to an innocent girl at least a fair degree of safety in the matter of yoking herself for life to a man whose physical condition she has as great a right to insist shall be pure and clean as the man, whether this condition be true or not in his own case, invariably expects of the woman.

The ministers acting alone can never accomplish the desired requirements. The physicians acting alone can never do it; nor can physicians and ministers together accomplish it without proper legislation. Nor can these three agencies accomplish the purpose without the backing of public opinion that will give the moral sanction to the law which will insure the possibility of its execution. It is largely, therefore, a matter of education. But the education has begun. Nay, it has progressed, and the time is surely not far distant when the church can take a decided stand on the matter in the assurance that people of varied denominational faiths will respect a position which maintains that it is criminal to allow physically and mentally deficient persons to marry and to propagate their kind; and that ministers shall be compelled by law to require health certificates from prospective bridal couples.

In conclusion, I desire to speak to that much of the public which may be represented here on

the urgency and importance of the subject. The time has come when false modesty should be laid aside. We must face the grim facts. As long as mothers center their ambitions for their daughters on husbands whose chief qualification is measured by the amount of income and the chance of business promotion, and in favor of such an applicant for their daughter's hand will turn down a suitor who, though possibly poorer, is at least clean, it will be a difficult thing to accomplish any reform, even though the ministers and physicians and the lawyers join forces in the attempt to put on the statute books good laws. The ultimate basis of the law is public opinion, both for the formation of the law itself and its enforcement.

There may be among ministers some who for the sake of a fee would perform a marriage ceremony without question. There may be among physicians some who earn their living by the practice of abortion and treatment of unmentionable diseases, but the rank and file of the ministers, Protestant and Catholic, are earnestly and sincerely set on the purpose of keeping the fountain of our national life pure at its source—the home; and the rank and file of physicians are unselfishly laboring for the same purpose. Tonight we stand together on the same platform, presenting to the public our common appeal for God, for country and for our children.

Eighteenth and Green Streets.

TWO-HEADED FETUS

R. E. DONNELL, M.D.
DE SOTO, MO.

I was called at 11 p. m. on Aug. 22, 1912, to see an unmarried girl, 16 years old. On arriving at the home, in the suburbs of the city, I was informed by her mother that "the water had broken and that she was in labor."

On examining the abdomen I noticed a marked prominence just above the pubes and at the fundus of the uterus. Between these two points the abdomen was softer and a depression was distinctly visible, so I thought there were twins, but as I did not have my stethoscope I did not listen for the heart sounds.

On making a vaginal examination I found the presentation to be occiput to left and anterior. The pains were light and five minutes apart, but gradually became closer together, and by 1 o'clock a. m. she was having good bearing-down pains. It required several hard pains to deliver the head after it had presented at the vulva.

On being delivered, the head failed to rotate, the pains were very hard, but the fetus did not seem to move, and on making a vaginal examination to determine what was wrong I felt the second head, occiput to left anterior also, but after a thorough examination I found that both heads were from the same body.

The patient was still having very hard bearing pains, close together. We turned her crosswise on the bed, brought hip over the edge, and by making traction on the first head during each pain the second head was delivered in twenty minutes. The shoulders, which were unusually broad, were delivered without any trouble.

There was no laceration and the patient got along fine and was up in twelve days.

DESCRIPTION OF FETUS

The fetus is a *dicephalus dibrachius diauchenos*—the class of monsters having two heads, two arms, two legs and one trunk.

The measurements of the head differ little. The face of the right head is somewhat smaller than that of the left, due to the moulding of the right head, while its circumference is slightly larger, as shown below. Measurement shows that they are actually of the same size. The faces are identical. There are two ears on each head; the eyes are apparently perfectly developed. The hair is black and abundant for a new-born. Each neck is of the same size and length, and about as long and as large as that of the average new-



Fig. 1.

born. The cleft between the necks extends down to the trunk, making each neck complete. The body seems perfectly developed, except that the chest is somewhat broader than usual in the average new-born. The skin throughout is well developed. The legs are somewhat deformed. There is a talipes valgus of both feet, especially marked on the right foot.

The body cavity was opened, but with some care and reserve lest the specimen be destroyed, which prevented a careful and detailed examination; however, certain very interesting observations were made.

There are two hearts inclosed in one pericardium. Each heart is complete and independent

of the other. The left is about one-third the size of the right, which is larger than usual in a child at term. The distribution of the vessels is atypical. Each heart has a large vein entering and one large artery. There is a stalk off the left heart which is about one-half of an inch long—blind at the end. This is an imperfectly developed aorta. The artery which is given off from each heart enters the neck, but in the attempt to save the specimen a careful dissection was not made.

There is only one set of lungs. The left has two lobes and the right three. They are atelec-

ring. There is one gall-bladder only. The stomach is small and tubular, and occupies a normal position. The small intestines are probably twice as long as usual; so also is the large intestine. Appendix free. Rectum normal. One perfectly developed anus. The testicles are undescended—they are just at the interval ring. Scrotum and penis well developed.

Skiagram shows two separate and complete spines, even to having two sacra. One set of innominate bones. The ribs on the left side of the right spine and those on the right side of the left spine are imperfectly developed. The ribs



FIG. 2.

tatic. The trachea of each neck enters its respective lung.

On the right side is a diaphragmatic hernia of the liver into the right pleural sac. The hernial ring through the diaphragm is much smaller than the liver, which has herniated, and on the liver is a deep groove into which the margin of the ring fits. There are two livers: one, the smaller, contained in a sac behind the pericardium, while the other, the herniated one, is much larger than usual. It is normal in shape except for the deformity due to its compression by the hernial

on the right side of the right spine and those on the left side of the left spine pass around forwardly, as in the normal, to form the chest. One sternum and two clavicles. Two scapulac. Arms normally developed. Child was delivered at term. Weight about 8½ pounds. Head measurements are as follows:

Right head: Occipito bregmatic, 4⅝ inches; interparietal, 4 inches; circumference, 13 inches.

Left head: Occipito bregmatic, 4⅜ inches; interparietal, 3¾ inches; circumference, 13⅛ inches.

Combined circumference of both heads, 19¼ inches; breadth of shoulders, 6½ inches; circumference of shoulders, 16 inches; length of child, 18 inches.

The accompanying photograph will give an excellent idea of appearance of child. Also accompanying skiagram will give idea of skeleton formations.

I am indebted to Dr. F. J. Lutz of St. Louis for the photographs and some of the data in regard to the pathologic findings.

The fetus is preserved in Keiserling's solution.

A MISSOURI EMBRYOLOGICAL COLLECTION

FRANKLIN P. JOHNSON, A.M., PH.D.

Associate Professor of Anatomy, University of Missouri
COLUMBIA, MO.

This article is an appeal to the physicians of the state for aid in building up a Missouri Embryological Collection." By this I mean a collection of human embryos and fetuses of all different stages, ranging from the very smallest obtainable up to those at full term. It will include not only fetuses which are normally developed, but monstrosities as well.

A collection has already been started in the Department of Anatomy of the University of Missouri, which is to serve as the nucleus for this central collection. It includes a number of embryos of the pig, rat, sheep and man, but not enough as yet to satisfy the demands which are to be made on it. The pig series of embryos, nevertheless, is nearing completion. Our main interest, however, lies in the human embryo, and these, unfortunately, are the most difficult for us to obtain unaided. We lack particularly the younger stages of the human embryo, which are the most valuable of all. The question which naturally arises, therefore, is, how are these early stages of the human to be obtained? The obvious answer is, from the physicians of Missouri; and it is to call the attention of the physicians of the state to this fact that this article is written.

It would be well perhaps to state to what uses the collection is to be put. Primarily, it is for the promotion of research in this field, i. e., for the scientific investigation of problems concerning development. It is not only for the students and investigators of the University of Missouri, but for any properly qualified person who cares to come here and make use of it. In addition, it will serve as a museum to those who desire to examine the specimens in a more superficial manner.

Those physicians who have kept pace with the work that is being done in embryology know that the subject has branched out and become

specialized in all its different aspects. Anatomists in all countries are carrying on investigations in this field, for this branch of anatomy offers to-day by far the best opportunities for research work. Many important contributions have been made in the last two decades, contributions which have given us a clearer understanding of the structure of the adult body in normal as well as in abnormal conditions.

A person who wishes to devote himself to embryology must have access to a good embryological collection. This is made apparent when one studies over the names of those who have attained prominence in this subject; all have had splendid opportunities offered in this line. In America, Minot's collection at the Harvard Medical School and Mall's at the Johns Hopkins Medical School are undoubtedly the most complete. The human embryos in these collections, many of which are very valuable to science, have been gradually turned in by physicians in their respective communities.

Cannot a valuable collection be built up in Missouri? I believe it can if the physicians of the state will lend their aid. And they will be lending all the aid which is necessary, if, when they fall into possession of an aborted embryo, or one found at autopsy, they will properly preserve it and send it to us.

In preserving and shipping embryos, the following points should be observed:

1. It is of paramount importance that embryos be put in some preserving solution as soon as possible after abortion. For preserving, a 10 per cent. solution of full-strength commercial formaldehyd is recommended, but 70 per cent. alcohol, or any other well-known preservative, may be used.

2. In case the embryo is small, do not remove the membranes.

3. Care should be taken not to injure the specimens by squeezing with fingers or metal instruments. In handling specimens, it is always best to use a specimen-lifter or spoon.

4. In shipping a small embryo in a mailing-tube, place the specimen in a vial between two pieces of cotton. Keep vial completely filled with fluid.

5. In shipping larger embryos, place in a 10 per cent. solution of commercial formaldehyd or in 70 per cent. or 80 per cent. alcohol. The container should be completely filled.

6. A brief history of the case should accompany each embryo where possible.

We have on hand a number of 4-ounce vials and mailing-tubes for the same, which we will gladly forward to any one on application. We want it understood from the beginning that we will gladly bear the expense of materials and the expressage of specimens.

Specimens which come to us, if not more than 6 cm. long, are put through the following technique: First, careful drawings or photographs are made of them at a low magnification. This is to serve as a record of how the embryo appeared before being cut up into sections. The embryo is then embedded in paraffin by the usual procedure and sectioned on a microtome in sections of about .010 mm. (about 2,500 sections to the inch) or thinner. Every section is carefully saved and mounted serially on large slides 40 by 75 mm. The sections are then stained and covered with a thin cover glass and labelled. The slides are kept in metal cases until wanted for use. Such sections, prepared in this manner, are most valuable to the investigator.

We can assure anyone who has a valuable embryo that it will receive the best of care when it comes into our hands. We are provided with excellent facilities for making serial sections, having the most accurate of microtomes and a trained technician who devotes a large part of his time to this work.

In conclusion, let me say that any contribution that is made to this collection will be greatly appreciated.

REPORT OF A CASE OF DIAPHRAGMATIC HERNIA

H. P. KUHN, M.D.

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KANSAS CITY, MO.

A male, college student, aged 28, was admitted to the Swedish Hospital at noon; died that evening without a definite diagnosis of his malady having been made.

Family History.—Negative.

Personal History.—He had had the acute exanthemata of childhood. There was no history of pneumonia, diphtheria, rheumatism or typhoid fever. Two years ago he received a crushing injury to the left chest with fracture of the seventh and eighth ribs about the anterior axillary line. From this accident he made an uneventful recovery, though he had been somewhat less robust and less active since then. There had been slight attacks of insomnia and loss of appetite. He had not been constipated nor had he vomited. There was no history of cough, thoracic or abdominal pain, or heart disturbance prior to his present illness except at the time of the accident, and then no more pain or discomfort than one would expect incident to a rib fracture.

Five days previous to his admittance to the hospital, after a scuffling bout, he became weak and nauseated. He had been nauseated and had been vomiting since. The temperature and pulse were normal for the first twenty-four hours, followed with a rise to 100 F. in temperature and a gradually increasing pulse. His physician reported epigastric distress with marked prostration. Calomel and oil were given at that time

with good results. His condition became progressively worse and he was removed to the hospital.

Status Praesens.—There is marked delirium and restlessness. The radial pulse cannot be felt. The mucous membranes are pale and the extremities are cold. The skin is clammy. He is in a state of collapse. Examination reveals a scaphoid abdomen with no points of tenderness. The liver dullness is normal. Urine removed per catheter showed no albumen or sugar. There were no casts. Diazo reaction was negative. The heart is visible to the median line, with a prominent apex beat. The interspaces are not distended nor is there any fulness noticed of the left chest. There is dullness at the apex with a prolonged respiratory murmur. The balance of the left chest is tympanitic. The right chest was normal. Auscultation of the chest is very unsatisfactory because of the restlessness and delirium of the patient. Blood examination by Dr. J. W. Hallberg showed a hemoglobin of 95 per cent.; erythrocytes, 5,200,000; leucocytes, 42,800. Differential examination of the leucocytes showed: polymorphonuclears 66 per cent. and small and large lymphocytes 32 per cent. Widal reaction negative. The patient died at 9 o'clock, some ten hours after admittance.

Autopsy.—Thorax: The left pleural cavity contained a large dilated stomach, the transverse colon was covered with omentum and the left lung compressed into a small mass in the apex. The stomach appeared to have been rotated upon its pyloric portion so that the greater curvature rested in the median line of the thorax under the sternum. The lesser curvature rested under what would have been the normal heart's superior border and behind the colon. The omentum was reflected over the stomach to the left and covered the colon. The pyloric portion of the stomach rested behind and under the colon and just inside the hernial ring. The colon was greatly dilated and occupied the outer portion of the pleural cavity to the left and anterior to the lesser curvature of the stomach. The hepatic and splenic flexures were pulled taut. Through the hernial ring passed the esophagus, pylorus and loop of colon. There were no adhesions. The colon and stomach stripped readily from the pleura. The heart was displaced to the right and anterior. There was no hernia sac, that is, there was no peritoneum and pleura in front of the herniated viscera. The opening in the diaphragm was through the anterior leaflet. The natural foramina were intact and contained no hernia. The opening in the diaphragm was made up of adult fibrous tissue and measured two inches in diameter. While the ring fitted snugly about the viscera, there was no evidence of strangulation of the bowel or stomach, rather a condition of acute dilatation. The abdomen, other than the absence of the herniated viscera, was normal. There was no evidence of a peritonitis.

Following the classification advanced by Vogel,¹ I should consider the condition described as an acquired false hernia. The opening through the diaphragm occurred at the time of the crushing injury to the left chest and no doubt the hernia took place at that time.

Rialto Building.

1. Vogel: Am. Jour. Med. Sc., cxlv, No. 2.

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EDITORIALS

CAPTIOUS CRITICISM

"Without fear of contradiction" is a very foolish statement to put into a sentence when that sentence includes such a sweeping assertion as, "the municipal hospitals of this country are a disgrace from almost every point of view and do not serve the purpose they should in any respect." Especially does this make one wonder at the transcendental wisdom of the experienced author when he follows by the equally promulgative tidbit of information, that even the small cities of Germany "have first-class hospitals from every point of view." And this, presumably, also without fear of contradiction. Moreover, for fear of leaving some one's feelings unhurt, the writer of the article, which, by the way, is entitled "Municipal Hospitals and Their Relation to the Community,"¹ goes on to state, in regard to our municipal hospitals: "Their culpable inefficiency and their inexcusable deficiency in serving the community is in a large measure due to the medical profession. The best physicians have not, up to the present time, generally, shown any interest in these hospitals or attempted to make them better."

Even for a quiet-minded, peaceful person, who intensely dislikes to mix in argument, we cannot allow such a statement to pass unnoticed. Possibly a nearer acquaintance with the personality of the father of these utterances might render comment unnecessary. If a tiny spitz-poodle with frenzied yelps and bristling hair dashes out with the avowed intention of biting a gaping hole in the 36-inch tire on your "six-sixty," when said tire is revolving at a rate that is carrying you down the boulevard at 50 miles an hour, you should worry!

Life is too short to waste time either with spitz-poodles or to bother about "contradiction" when it comes to such broad assertions as above quoted. However, one cannot be denied the reaction of being peeved. And one is peeved when he has spent the last ten years in rather close contact with both American and German municipal hospitals, has worked and bled, and has watched the best men of the profession give their time and knowledge to municipal hospital improvement, beating up against the blank wall of

criticism and being reviled and misunderstood by the people they were trying to help, but not caring for themselves as long as they could see eventually a better condition for their community. And one is peeved when, praise be to Allah, he has actually seen slow but progressively intelligent advances in every one of our great cities and has found the service that has resulted far better in many instances than some of the curious shortcomings and medieval customs that are found only too often still clinging to the German hospitals, despite their wonderful beauty and scientific organization. And when one has attempted to write discriminatively both praise and censure with a view toward instructive criticism and American municipal hospital progress, such a one, we repeat, has a right to be peeved when confronted with statements so untrue, so unjust to the medical profession and so destructive as those quoted.

A CRACKED PLATTER

According to the announcement of our frothing friend from Chi and the several Lydstonian satellitious, advertising "scientific" medical journals published for profit, the dear rank and file of the American Medical Association, poor, debased, down-trodden creatures, have had their organization handed back to them—but on a cracked platter with a string tied to it. The platter on which the organization—that has never been out of the hands of the rank and file—has been "returned" to them, according to our contentious friends, is a divided opinion of the Appellate Court of Illinois in the case of Dr. G. Frank Lydston against the state's attorney of Cook County, which opinion holds that the state's attorney should institute quo warranto proceedings against the American Medical Association to compel that body to show that it has carried on its affairs according to the laws of the state.

For the information of our members, we will say that the statute of Illinois controlling corporations reads: "The by-laws of every corporation for profit shall provide for the calling of meetings of directors, trustees, etc. . . . Provided that the action of any meeting held beyond the limits of this State shall be void."

There is another section referring to corporations not for profit concerning which the statute says: "Societies not for pecuniary profit may elect trustees . . . in such manner at such times and places . . . as may be provided by the by-laws."

It is at this point that the appellate court takes issue with the circuit court and the state's attorney, and by its divided opinion "thinks" the last section should be considered as meaning not what it says but what the first section says. The court, of course, has a perfect right to think thus.

1. Jour. A. M. A., Nov. 29, 1913.

but the opinion is not convincingly rendered, therefore the question must remain unsettled until the supreme court has passed on it. It is the opinion of eminent legal talent, of the Circuit Court of Cook County, of one of the appellate judges and of the state's attorney of Cook County, that the law means what it says, viz.: "Societies not for pecuniary profit may elect trustees at such times and places . . . as may be provided by the by-laws."

For sixteen years the American Medical Association has been conducting its affairs according to this law, and the legality of its proceedings has been investigated and pronounced correct by competent counsel on more than one occasion during this period.

The following announcement by the Board of Trustees of the American Medical Association is comprehensive and clear:

THE ALLEGED DECISION AGAINST THE AMERICAN MEDICAL ASSOCIATION

There have appeared recently in the public press and in a number of medical journals interviews and letters purporting to have emanated from Dr. G. Frank Lydston, in which it is claimed that he had won a very important decision in the Appellate Court against the American Medical Association;¹ that the American Medical Association was, and has been, acting illegally for several years; that the trustees are illegally holding office and that all of the acts which have been done by the trustees are illegal. As these statements are untrue, the Board of Trustees, at its meeting Nov. 7, 1913, authorized that the facts be published for the information of those members of the Association who are not familiar with them.

As is well known, for a long time Dr. Lydston has carried on a wordy warfare against the association and its officers. We are informed that for several months prior to January, 1911, he and his attorney endeavored to induce the state's attorney of Cook County to file a petition for a mandamus against the trustees of the association, claiming that they were illegally elected. The state's attorney, after investigating the subject, decided that there was no case against the association and declined to bring the suit. The matter was then taken to the attorney-general of the state of Illinois, who likewise declined to bring the suit.

Jan. 5, 1911, he filed a petition in the Circuit Court of Cook County *against the state's attorney* of that county praying that *the latter be compelled to commence an action of mandamus against the trustees and the association*. To this petition the state's attorney filed a demurrer, which in legal effect is making an issue on the petition as filed to the effect that granting all that is stated in the petition to be true, there is yet no cause of action. No proof or evidence of any kind is offered or received on such an issue. A lengthy hearing was had on the demurrer, and the judge sustained the same and dismissed the petition. From that decision an appeal was prayed but was not perfected.

April 28, 1911, a new petition was filed *against the state's attorney*, which petition was more elaborately drawn than the first one; and again the state's attorney filed a demurrer to the same. Another lengthy hearing was had on this demurrer, and again the judge

sustained the demurrer and dismissed the appeal. An appeal was perfected to the Appellate Court, which court consists of three judges sitting as a reviewing court. Arguments were made in that court, and on Oct. 9, 1913, by a divided court, the finding of the judges below was reversed by the opinion of two judges, one judge dissenting. From this decision an appeal has been prayed by the state's attorney and allowed to the Supreme Court of Illinois, where the cause is now pending.

As will be seen, the decision does not in any way affect the American Medical Association, but relates entirely to the duties of the state's attorney. Should the Supreme Court sustain the decision of the Appellate Court all it would mean would be that the state's attorney would have to bring quo warranto proceedings against the American Medical Association. Then, and not till then, would the American Medical Association be technically concerned, and not until then would the question come up as to the association's method of transacting its business. It will be seen that the statements and inferences contained in the interviews and articles above mentioned, that Dr. Lydston had won a great decision over the American Medical Association, are without foundation in fact.

There has never been the slightest doubt or question on the part of counsel but that every act of the association has been perfectly legal, and in every way in conformity with the statute of the state and decision of the courts.

BOARD OF TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION,

W. T. COUNCILMAN, Chairman,
M. L. HARRIS, Secretary.

THE PSYCHOLOGIC FACTORS IN THE PRACTICE OF MEDICINE

In these days when the air is full of talk about mental healing, and the daily papers, the weekly publications and the monthly magazines teem with articles setting forth the marvelous effects to be had from endless varieties of mental therapy, there is little danger that the medical profession will not take heed. In fact, the medical prints are publishing so much in reference to the various phases of psychic diagnosis and treatment that any doctor who reads at all must have it spread abundantly before him.

The greater danger is that too many physicians will overestimate rather than underestimate the "psychic factors" in medical practice, either consciously or unconsciously slipping easily over diagnostic work or neglecting it under the belief that the prescription, if nasty enough, will so impress the patient's mind that a cure will be effected.

It would be a curious and more or less appalling discovery if we could have spread fairly before us the actual physical states, and the so-called remedies for them, which each day pass, undiagnosed and prescribed for, from the offices of the doctors in any city or place.

Just how often does it happen that a specific remedy is prescribed for a specific disorder, in comparison with the number of times that a medicine is given because it is necessary to give something for a condition either not looked for or overlooked! It is the psychology of the doc-

1. The point at issue is whether or not a corporation organized "not for profit" comes under the law of Illinois governing joint stock corporations: specifically whether it is necessary to hold meetings in Illinois for the election of officers. The question is one that affects all similar associations, as for instance the American Pharmaceutical Association, National and Retail Druggists, several fraternal societies, etc.

tor rather than of the patient that we need to give attention to. How much laziness, hurry, carelessness and indifference are expressed in the countless prescriptions on file in any drug store! The fact that there is a mental factor in all human illness and that there is a natural tendency for the majority of human ills to right themselves in spite of medicines if the sufferers only have faith in them, has probably led to more carelessness and incompetence in diagnosis than poor instruction.

Let him who desires to utilize the mental factors of cure first find out whether there is a dulness in the apices, casts in the urine, a paucity of red or an excess of white cells in the blood; let him study carefully all the elements necessary to a thorough knowledge of the person under his care, and when he has finished he will find that he has already given his first potent dose of psychotherapy. A rational, non-technical discussion of the various facts elicited will constitute a second dose.

More things are missed by not examining at all than are overlooked during examination. Even a doctor with compound hyperopic astigmatism can see some disorders, if the patient is stripped, that might be ascribed to disorder of the imagination if the patient is prescribed for fully clothed.

"BUT THE MAJORITY FAIL TO RESPOND"

"Our last meeting was a good one, but I find getting the members to prepare a paper or take part in the program a difficult task."

Thus does one of the county society secretaries describe the greatest obstruction to progressive work in the county society; his society is one that holds monthly meetings, usually well attended, and its members have a fairly broad conception of the value of the organization to themselves and to the public. "I can always count on a few," he says, further, "but the majority fail to respond." To this majority we would address a few words concerning the writing of papers and presentation of cases at county meetings.

The object of the organization of county medical societies is: "By frequent meetings and full and frank interchange of views, to secure such knowledge, unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in scientific, public health, legislative, material and social affairs." Scientific work comes first in this list of purposes, and that is right. Improvement in our knowledge of how to treat disease is the great study of the medical man. Let no man think his experience too limited or too circumscribed to develop ideas that may be useful to his fellow practitioners. "The full and frank interchange of views" is what counts in any meeting for the study of methods of treating the sick. Every

member should attend these meetings with that spirit of inquiry and open-mindedness which seeks larger knowledge from the experience of others, and to impart information gained in his own practice. Books, treatises, journals and monographs are aids and should be studied, of course, but the free, friendly, intimate exchange of ideas with the men in your own community is the means of stimulating thought and action not found in books.

We would here try to impress on members to appreciate the great value of the clinical report. Important as are long and studied essays, they are not always the most stimulating toward a better understanding of how to conduct a case. Another method of creating deeper interest in meetings is the symposium. Symposiums are most excellent for the comprehensive study of a condition that interests all members from one standpoint or another, and they ought to be more frequent in the societies. Articles by one or more members who have given special attention to certain conditions should be highly interesting if the exclusive study is supplemented by other papers on related conditions.

There is also the side of the public to be considered. Several meetings each year ought to be devoted to a discussion of measures for the prevention of disease, the sanitary conditions of the towns in the county, the hygienic conditions of the home and to personal hygiene. Such meetings should be open to the public and laymen of prominence should be asked to take part.

These are a few hints on scientific work and a special appeal to the "majority of the members" to prepare and present papers that will stimulate thought and discussion at the meetings.

COUNTY COURT PROMOTES HEALTH PROTECTION

The county court of Knox County recently appropriated a sum of money to be used in defraying the expenses of a lecturer on public health under the direction of the Knox County Medical Society. The special subject of discussion was tuberculosis, and Dr. W. McN. Miller of Columbia delivered a series of lectures in seven towns during two days. Whilst speaking particularly on the prevention of tuberculosis, Dr. Miller laid stress on the necessity of cooperation between citizens and officials with the county medical society in maintaining hygienic and sanitary conditions in towns and homes to the end that disease breeding focuses might be eradicated. The newspapers of the county cooperated in a commendable manner and gave much publicity to the lectures.

We believe this is the first instance of intimate cooperation of the county court with the medical profession to bring the people into close and intimate relation with the great movement that has spread over the country to instill a proper

knowledge in the minds of the people of the means and methods of protecting themselves against contagion and infection.

The example of Knox County court should be an inspiration for other county courts to do likewise. Spending a modicum of the people's money in this manner is the best kind of investment. The interest earned will be seen in a more vigorous people, less sickness, fewer deaths and longer life. Surely such things are worth fifty or one hundred dollars a year to any community.

A NEW HOSPITAL JOURNAL

The *Modern Hospital* is a new monthly publication now in its fourth issue that will undoubtedly receive generous support from hospital and institutional authorities. It is a book of generous proportions, containing about 75 pages of reading matter in each issue, printed in type well spaced and of a size excellently well adapted to easy reading matter, and very attractive in all mechanical features. The articles are judiciously selected, elaborately illustrated and pleasingly written. There are several departments in which special phases of hospital administration are informingly considered. Those who are interested in hospital work will find in the *Modern Hospital* discussion of themes which are of highest importance to them and learn of the methods which contributed to the success of other hospitals. We note with much satisfaction that the advertising department is under the supervision of the editors, and that "only approved articles and reliable manufacturers will be represented." The staff of editors is composed of experienced hospital men in various large cities, with headquarters at Chicago. Dr. John A. Hornsby, Chicago, directs the editorial department, and Dr. Otho F. Ball, St. Louis, is president of the company and has charge of the business department. The subscription price is \$3 per annum.

OBITUARY

GEORGE C. LOSEY, M.D.

Dr. George C. Losey, Almon, a graduate of the Northwestern Medical College (St. Joseph, Mo.), 1888, a member of the Hickory County Medical Society and the Missouri State Medical Association, died Dec. 2, 1913, as the result of an accident while on his way home from the county society meeting.

PHILIP SCHOLZ, M.D.

On July 31, 1913, Dr. Philip Scholz, an active member of this Society, died, after a short illness, following an automobile accident. He was in his sixty-third year, and had acquired an enviable

reputation as a physician and citizen, as well as a large, though exacting, practice in North St. Louis. He was interested in medicine from his youth, but was unable to realize an early ambition to graduate until his thirty-eighth year, in 1889, when he received his diploma from the College of Physicians and Surgeons. Before beginning his medical college course in 1886, he had eighteen years of successful experience in the drug business at various times in this city, and in manufacturing ventures in St. Louis and Evansville, Ind.

In the year of 1880, fire, and in 1882-1883 floods almost completely destroyed his interests, but in 1884 he was able to resume the drug business with marked success. It is no wonder that a man of such indomitable courage, strengthened by adversity, should rapidly acquire a large, remunerative practice, which he attended for a quarter of a century at the location of his first office. He married in 1874 Florence Belle Carrington, daughter of a widely known North St. Louis physician. The widow, with his parents, Rev. and Mrs. C. F. W. Scholz, two brothers, three sisters, four daughters and a son, our colleague, Dr. Roy Philip Scholz, survive him. Dr. Scholz was a member of the American Medical Association and the affiliated state and local societies, and the American Pharmaceutical Association. He had in recent years given up membership in various fraternal and social organizations, devoting his time more and more exclusively to the practice of his profession. Dr. Scholz was a man of few words, modest but forceful. His diagnostic skill was almost intuitive, and with his knowledge and experience in pharmacy made him an effective therapist. His experience in life, and his noble qualities made him a true physician and loyal friend. He did much to interest the physicians of his vicinity in the work of the St. Louis Medical Society, and was particularly active in its development and progress at a time when his cooperation was most needed. In extending our sympathies to his family, we cherish the memory of a brave and honorable comrade.—(From *Bulletin* of the St. Louis Medical Society.)

ANDREW L. FULTON, M.D.

Dr. Andrew L. Fulton died July 15, 1913. He was born in a log cabin in Southwold, Elgin County, Ont., Canada, Sept. 30, 1843. He belonged to a family of six brothers and one sister.

His native place was a new forest country, where sturdy manhood is developed. He, with the other members of the family, according to a record left by Dr. Fulton himself, suffered many privations and hardships not known in older countries. His early schooling was picked up in a country log schoolhouse, where he went four months in the year, the other eight months being given to work. The higher education which he

enjoyed was gotten by a combination of study and work; and by this means so rapidly that he taught school at an early age, and was principal of the school at Pt. Stanley, Canada, when he was 20 years old. In 1866 he entered the Medical Department of Victoria University, Cobourg, Ontario, where he studied two years, and then in 1868 he entered Bellevue Hospital Medical College, New York, from which school he was graduated April 1, 1869, being graduated a few weeks prior to this from the Cobourg school. In 1870 he located in Ft. Scott, Kan., where he remained until 1884, when he came to Kansas City, Mo., where he soon became prominent as a surgeon. He was connected with the old Kansas City Medical College, as professor of anatomy, applied anatomy of the nervous system, and later professor of surgery, in all over twenty years. Shortly after coming to Kansas City he united with Dr. Geo. Halley in publishing and editing the Kansas City *Medical Record* and after a half dozen years he became sole proprietor and editor. In this capacity of medical magazine work he was of signal service and benefit to this Society, as he was rarely absent from its meetings, and his reports of papers read and discussions in the *Record* were a great help to the society. He was also a member of the Missouri State Society, the American Medical Association and of other societies.

Dr. Fulton's standing in his profession was always good. Besides his ability as a physician his character both as a doctor and a citizen was above reproach. All the old members of the society knew Dr. Fulton for his blunt and unvarnished honesty, and his noble character. His widow and his son who are left to mourn will miss him much. The society extends to them and to his brothers and sister its deep and heartfelt sympathy and fellow-feeling.

A. A. FREYMAN.
TOM FIELDS.

(From *Bulletin* Jackson County Medical Society.)

NEWS NOTES

DR. LUTHER M. CALLAWAY has been appointed school inspector in Kansas City.

THE hobos who sleep in the municipal lodging house of St. Louis this winter must submit to a medical examination and a bath.

DIPHTHERIA in the city jail of St. Louis recently assumed the proportions of an epidemic and caused the jail to be quarantined.

DR. F. E. CHAPMAN, for five years associated with the Frisco Hospital in St. Louis, has been appointed superintendent of the St. Louis City Hospital.

DRS. H. W. SOPER AND R. WALTER MILLS, St. Louis, announce that they have formed a partnership in their professional work, with offices in the Wall Building, Vandeventer Avenue and Olive Street.

SMALL-POX in Kansas City caused the closing of one of the public schools recently. Sixteen cases developed in the Benton School. There were no malignant cases, one boy attending school throughout the progress of the disease, which was light and thought to be chicken-pox.

HEALTH officials of Kansas City have begun a systematic inspection of street cars with the object of seeing that they are kept clean and well ventilated. Enforcement of the anti-spitting law, which is quite generally ignored even in street cars, will also be given attention by the inspectors.

THE House of Detention in St. Louis is in such bad sanitary condition that Delegate Nathan Hall introduced a resolution requesting the board of public improvements to investigate the conditions. "The schoolroom," Delegate Hall is quoted as remarking, "is remindful of the Tower of London and is as unfit for education as a cesspool is for a banquet room." It is said the House of Detention is a temporary bastille, where youthful prisoners and women are held pending an investigation. The city leased the present structure, which was a former residence, because it is located in the immediate vicinity of the courts.

Since November 1 the following articles have been accepted for inclusion with New and Non-official Remedies:

Digipoten, Digipoten Tablets, Slec's Tetanus Antitoxin, Slec's Antimeningitis Serum, Slec's Antistreptococcal Serum, Slec's Normal Horse-Serum (Abbott Alkaloidal Co.).

Arheol (P. Astier).

Fairchild Culture of the *Bacillus Bulgaricus* (Fairchild Bros. & Foster).

Bordet-Gengou Bacillus Vaccine for Whooping-Cough Therapy, Bordet-Gengou Bacillus Vaccine for Whooping-Cough Prophylaxis (Greeley Laboratories).

NEW MEMBERS

Membership changes in November:

Francis M. Barnes, Metropolitan Building, St. Louis, St. Louis Medical Society.

George R. Dagg, North Kansas City, Clay County.

Hiram M. Dagg, North Kansas City, Clay County.

William L. Davis, Elmira, Clay County.

Clyde P. Dyer, 3660 Fairview, St. Louis, St. Louis Medical Society.

Paul Forgrave, King Hill Building, St. Joseph, St. Joseph-Buchanan-Andrew.

John A. Flury, 520 Metropolitan Building, St. Louis, St. Louis Medical Society.

Albert A. Gebhard, 2920 Chippewa, St. Louis, St. Louis Medical Society.

Charles Greenberg, Sixth and St. Francis Streets, St. Joseph, St. Joseph-Buchanan-Andrew.

Otto M. Koenig, 3515 Park, St. Louis, St. Louis Medical Society.

Louis H. Mestemacher, 1704 N. Union, St. Louis, St. Louis Medical Society.

James F. McFadden, 3933 S. Broadway, St. Louis, St. Louis Medical Society.

Caryl Potter, Seventh and Edmond Streets, St. Joseph, St. Joseph-Buchanan-Andrew.

M. Hayard Post, Jr., Metropolitan Building, St. Louis, St. Louis Medical Society.

CHANGES OF ADDRESS

W. D. Brown, Newtonia to Carthage.

Carl J. Drake, City Hospital to City Dispensary, Eleventh and Market, St. Louis.

O. A. Schmid, Bethany to St. Joseph, Schmid-Norman Building.

H. B. Shedd, St. Louis to Laporte, Ind.

Thomas W. Taylor, St. Louis to Birmingham, Ala., Hamilton Laboratories.

A. W. Teel, Kahoka to Box 74, Glendale, Cal.

DEATHS

D. K. Stringer, Galt, Grundy County, November 11.

MISCELLANY

OKLAHOMA EXCLUDES CLASS C GRADUATES

The State Board of Health adopted a resolution declaring in effect that hereafter Class C school graduates would not be licensed. They denied the application for reciprocity from Texas of Felix Peebles of Bivins, Texas, a graduate of the Gate City Medical College, and later of the St. Louis College of Physicians and Surgeons, also a Class C school.

The application of Dr. W. F. Gordon, Temple, Okla., was also denied in view of certain specific charges filed against him, and he was denied permission to withdraw his application for license.—*Jour. Okla. State Med. Assn.*

THE SANATOGEN "GRAND PRIX"

A number of letters have been received recently expressing surprise that Sanatogen had been granted a "grand prix" at the Exhibition

of Medical and Surgical Material held in London at the same time that the Seventeenth International Congress of Medicine was in session. The correspondents have asked what such an "honor" meant. The company which exploits Sanatogen in the United States has not been slow to apprise the American public of the award. It has gone further and has written the advertising managers of magazines—including those that had refused Sanatogen advertisements—directing their attention to the fact that Sanatogen was awarded a "grand prize" and opining that "this unusual distinction" should make plain "the desirability of the presence of Sanatogen in the advertising columns of your esteemed publication."

Those familiar with the methods of awarding prizes, medals and certificates to commercial firms and their products at expositions and exhibitions attach little weight to the "honors" thus conferred. It is a fact that most purchasers of large—and expensive—exhibit space at such exhibitions receive some kind of award which, it is tacitly understood, will be a useful advertising asset. Every one can call to mind many food products of mediocre quality that have flaunted on their labels the gold medals received at various expositions.

Nevertheless, it seemed worth while to find out just what the connection was between the commercial exhibition at which Sanatogen received the grand prize and the Seventeenth International Congress of Medicine. The following facts were developed: The commercial exhibition was entirely distinct and separate from the scientific exhibit of the Congress. It was managed and conducted by a British drug journal which had been giving annual "exhibitions" of its own for some years past, and this took the place of its regular exhibition. Immediately after the awards were made public the advertising pages of this drug journal were filled with full-page advertisements of the various products that received prizes. It may interest our readers to know that while the cottage-cheese-glycerophosphate product Sanatogen received a "grand prize," two other proprietary cottage-cheese-glycerophosphate products received "gold medals" at the same time. In the pharmaceutical department of the exhibit a widely—and fraudulently—advertised "patent medicine" received a silver medal! From the facts given it should not be difficult to appraise at right value the "honor" conferred on Sanatogen. The fact that the exploiters of this preparation are trying to make capital out of this "award" is significant.

Among the members of the Award Jury whose names were given by this drug journal were three men of prominence in Great Britain, to whom we have written. A reply has been received from one, Dr. Stephen Paget, who says:

"I was not on the jury, nor do I know anything about the matter. . . . I had nothing whatever to do with the awarding of prizes."—*Jour. Am. Med. Assn.*

A FILM ON A FAKE CURE

The "movies" are on the trail of fake consumption cures. How thousands of consumptives lose their lives annually by taking fake cures for tuberculosis, will be depicted in a motion-picture film which has just been produced by Thomas A. Edison, in cooperation with the National Association for the Study and Prevention of Tuberculosis. The film is entitled "The Price of Human Lives," and will be placed on exhibition in theaters throughout the United States on December 2.

It has been designed to further the Red Cross Christmas seal sale and the general antituberculosis campaign.

The scenario abounds in contrasts, human interest and poetic justice, and leads on through tragedy to "they lived happily ever after." In brief, here is the story: The heroine, Beth Cort, is engaged to Harry Bruce. She is the daughter of a wealthy drug manufacturer; he a successful young advertising manager. She has become interested in social service through Red Cross Christmas seals, and does some visiting as a volunteer.

Thus she meets Nellie Linn, a consumptive, who is taking Concura for her "hard cold." Nellie's lover, Ed, also a consumptive, is being treated by a fake advertising doctor. Both are deaf to Beth's protests until the friend who recommended Concura dies of tuberculosis. Beth determines to report these cases to the company who manufacture Concura, and ablaze with indignation goes to their offices and finds—her father and lover. For her father's wealth comes chiefly from Concura; and her lover earns his living, and proposes to earn hers, by exploiting the stuff!

Revelation is followed by reform. The father becomes a changed man and makes all possible restitution to his victims; the lover sends Nellie and Ed to a sanatorium, where they soon make satisfactory progress. And so on Christmas Eve, 1913, joy reigns once more in the wealthy Cort home, as well as in the poor rooms of the Linns. —*The Survey.*

The double cross which, for ten years or more, antituberculosis societies and institutions have been using as a symbol or emblem of their fight against tuberculosis, has recently been standardized by the National Association for the Study and Prevention of Tuberculosis.

In this use it was first formally adopted by the International Antituberculosis Association in

Berlin in 1902, when it was proposed by Dr. C. Sersiron of Paris. He took the shape of the cross from the common Croix de Lorraine and the cross of the Greek Catholic Church. The emblem is being used to-day by antituberculosis workers in every part of the world.



In the standardized emblem, the width of the standard of the cross is the unit of measurement and all angles in the points are of 45 degrees. The same proportions are maintained in all sizes varying in length from one-half inch to 6½ inches or more.



Antituberculosis societies may obtain these cuts from the Missouri Association for the Relief and Control of Tuberculosis, Columbia, Mo., for use in stationary and literature, at cost price.

LIMPING TOWARD A SANE FOURTH

A substitute for the bill preventing the sale of fireworks in St. Louis has been introduced in the council. It permits the sale of fireworks on the first four days of July. It limits the size of explosives and excludes the aerial bombs and fire balloon to which Chief Swingley and the Fire Prevention Bureau especially objected. The bill is reported to have been drawn by the attorney for the fireworks dealers.

In behalf of this measure it is claimed that it will enable wholesale dealers to continue in business, whereas the passage of the so-called administration bill would have compelled them to quit. It is also contended that its restrictions will reduce to a minimum the danger to life, limb and property.

The bill, apparently, is a compromise calculated to placate public opinion while working

the least possible hardship on the fireworks dealers. It may prove satisfactory, but the actual test of a Fourth of July celebration will be needed to determine that. Its enactment will mean that the Municipal Assembly is willing to experiment with partial regulations for a safe and sane Fourth. The belief that it will work out all right is necessarily fathered by the hope that it will.

Other cities are less considerate of a special interest and more solicitous of the public interests. Other cities have put the ban on the sales of fireworks. They have not denatured the Fourth of July, either. Instead of indiscriminate and irresponsible and frequently malicious explosives, they conduct municipal displays under the direction of experts and under circumstances which expose neither life nor limb nor property to destruction.

All the big cities, sooner or later, will adopt that method of observing the Fourth. As the fireworks dealer sees it, it may be confiscation. From the public's viewpoint, however, it is self-preservation. The public has reached that conclusion only after a fearful price paid in blood and ashes.—St. Louis *Republic*.

USE OF HEROIN SPREADING RAPIDLY AMONG DRUG FIENDS

Laws against the promiscuous sale of morphin and cocain leading those with drug habits to take up even more dangerous substances.

According to information gathered by the U. S. Department of Agriculture, there has been a sudden and very significant increase in the use, by persons with a drug habit, of the little-known but very dangerous drug called "heroin." The sales of this drug have recently increased greatly, particularly in those states which have rigid laws preventing the indiscriminate sale of morphin and cocain. Investigation of the subject establishes the fact that many drug victims who formerly used morphin and cocain, and who under the new laws find it difficult to obtain these substances have begun using heroin, the sale of which is not as yet as carefully restricted under state laws. The department, pending further action, specially warns all people who are unfamiliar with the drug to avoid all preparations containing the substance and to take it only on the prescription of reputable physicians.

Heroin, the consumption of which by drug takers has recently increased so markedly, is frequently found as a constituent of a number of proprietary drugs. This year the coroner's office in Philadelphia County has held inquests on five sudden deaths from heroin poisoning. In each case the victim was a heroin fiend and was on a heroin debauch and took an overdose. The sub-

stance apparently is far more dangerous for drug users than morphin or cocain. Drug fiends apparently are able to consume relatively large quantities of the other two drugs, but any sudden and material increase in the amount of heroin taken is very liable to prove fatal. As indicating the wide sale of this substance, it is known that one druggist in Pennsylvania whose store was located in an undesirable section of his city has been buying heroin tablets in 25,000 lots.

The labels of proprietary and other medicines purchased by laymen should be carefully scrutinized for a statement which is required by the National Food and Drugs Act of the quantity or proportion of heroin, or any derivative or preparation thereof.

The word "heroin" on any label should be regarded as a danger signal, according to the experts of the department.

Occasionally you still meet a man who scoffs at germ theories and thinks the world has gone mad on the microbe proposition. With a big, impatient gesture he postulates that we got along all right before bacteriology revealed to us the ubiquitous germ. So we did. Only a lot of us died because we did not know. Those of us who are yet at the meridian—in fact, still on this side of it—can remember when a case of peritonitis was almost invariably fatal. McBurney died the other day. He made appendicitis fashionable, according to the jokesmiths, but he taught physicians how to cure what they supposed was peritonitis by cutting out the obsolete appendix.

The vermiform appendix did not wait to be discovered before it entered on its murderous campaign. Its discovery simply enabled us to defend ourselves against it. It is precisely the same with germs. The blood shed by the Alexanders, Caesars, Napoleons and the New York, New Haven and Hartford Railroad is a drop in the bucket compared with the massacres chargeable to dirt and its vicious headsmen, the germs. The "good old times" is buncombe. In the clearer, cleaner knowledge of to-day we can look back and see the dim, irreligious light of other days in its flickering hideousness.

Babies first, if you please. The dairyman's pocketbook and our own afterward. Let us have pure milk.—St. Louis *Republic*.

Before upholding the action of the police court in imposing a fine of \$50 and costs on Harry Duel, 5438 Easton Avenue, for selling decayed fish, Judge Clark delivered a lecture on the iniquity of those who sell impure foods.

"I have some sympathy for the pickpocket," he said, "because he steals only a man's purse, but I have no patience whatever with a dealer who sells rotten food, for he steals a man's health."

Collins Painter, 1643 Semple Avenue, the complaining witness, told of buying some fish from Duel October 8.

On his way home, he said, he noticed a bad odor arising from the parcel, so he carried it to the police station and submitted the fish to the judgment of the desk sergeant and three patrolmen.

The consensus of opinion was against Duel. The four policemen appeared as state witnesses.

Judge Kimmel, in the first district police court, where the case was tried two weeks ago, found Duel guilty and fined him \$50. Duel appealed.

When Judge Clark affirmed the sentence Duel paid the fine and costs.—*St. Louis Republic*.

SOCIETY PROCEEDINGS

MISSOURI STATE CONFERENCE OF CHARITIES AND CORRECTION

The fourteenth annual meeting of the Missouri State Conference of Charities and Correction was held at St. Joseph, November 14, 15, 16. The entire three days were filled with conferences and many good points were presented. "The Needs of Our State Institutions and Field Work in State Hospital Service," by Dr. M. A. Bliss, was well received. A summary of his remarks follows:

"When we attack any problem, our first move is to make a careful survey of all the elements concerned. Without the knowledge gained by an intimate examination, we make serious mistakes. It is the unanimous judgment of all men active in psychiatry that heredity is the most important single factor in the causation of insanity. Our hospital records at present contain practically no information concerning the ascendants and descendants of the patients. Environment is estimated as an element of great importance. We now know almost nothing of the conditions surrounding the patient before admission nor to which he returns if discharged. Information on both these lines can only be secured by personal visits. The staff members are too much occupied to allow time to be spent in field work. We should have a trained field worker attached to each hospital who would not only gather all the information possible about every member of a family having a charge upon the state in a hospital, but report also on environment and fulfill the duties of after-care."

Rev. J. N. Crutcher of the State Board of Charities offered many suggestions of value when speaking on the "Needs of Missouri's Penal and Reformatory System." Mr. Osear Leonard, superintendent of United Jewish Educational and Charitable Associations of St. Louis, spoke on "Family Desertion." He recommended showing pictures of deserting husbands in moving picture shows. "District Tuberculosis Hospitals" was ably presented by Dr. Daniel Morton of St. Joseph, and his remarks were full of important recommendations. The recommendations of the conference committee on social legislation were accepted and the conference pledged its support of this legislation. The report suggested legislative acts as follows:

1. To protect the rights of illegitimate children.
2. To make child abandonment a felony.
3. To prohibit marriage of the unfit.

4. To abolish common-law marriage (provided the rights of illegitimate children are already protected by adequate legislation).

5. To establish a state-wide probation system.

6. To establish bipartisan boards for state institutions, and to create a thorough-going merit system with civil service competitive examinations for all employees in the state charitable and correctional institutions.

7. To establish a state reformatory for young women along the lines of the Bedford Reformatory of New York.

8. To increase the allowance for widows and orphans established in the law for Jackson County and to extend the law as rapidly as practicable to other counties.

9. To establish adequate workingmen's compensation laws.

10. To establish a minimum wage board.

11. To increase the support of the State Board of Charities and Corrections, that it may fulfill the functions laid down for it in the law, especially that it may make a thorough study of the problem of the feeble-minded in Missouri.

The conference also recommends the following measures of social legislation:

1. The amendment of the present child-labor law so as to prohibit all children between 14 and 16 from securing working papers unless they have passed eight grades of the elementary school and have received a certificate of physical fitness from a competent physician appointed for this purpose.

2. The enactment of a law providing for a more effective plan for settling industrial disputes within the state than that offered by the present Board of Arbitration.

3. The adoption of the proposed amendment authorizing the state to grant pensions to the blind.

4. The enactment of a law providing for the supervision by the State Board of Charities of the private charities of the state.

5. The abolition of the present fee system in the bureau of factory inspection, the substitution of state paid officials and the enlargement of the inspection force.

6. The conference approves every attempt made to secure a proper revision of our state constitution so as to facilitate the enactment of social legislation.

7. It disapproves of all attempts to amend the constitution in such a way as will restrict the right of the people to decide on policies of taxation, finance or social reform. Such interference with popular government must be resolutely opposed.

Be it further resolved, that this conference use every means to cooperate with such agencies or associations as are seeking similar legislation.

The officers elected for the ensuing year are: L. A. Halbert, Kansas City, president; Osear Leonard, 901 Carr Street, St. Louis, secretary; C. E. Rush, St. Joseph, and J. L. Wagner, Columbia, assistant secretaries.

A visit to the State Hospital at St. Joseph was one of the many pleasant and profitable features of the meeting. All were enthusiastic in praise of the appearance of cleanliness and the humane care of the inmates.

A. S. B.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI

The annual meeting of the Medical Society of City Hospital Alumni, St. Louis, was held in the parlors of the St. Louis Medical Society, Thursday, December 4, 1913.

The meeting was called to order by President Dr. F. C. Simon, at 9 p. m., Dr. T. R. Ayars acting as secretary in place of Dr. Sewing.

SCIENTIFIC PROGRAM

1. A case of Paget's Disease with X-Ray demonstration, by Dr. Walter Baumgarten.

Discussion by Drs. Given, Campbell, Cook, Hewitt, Horwitz and Shutt; Dr. Baumgarten closing.

Dr. Hewitt reported on resolutions on the death of Dr. Iralsen. It was moved by Dr. Baumgarten, seconded by Dr. Taussig, that the resolutions be adopted. Motion carried.

The following names were proposed for membership: Active membership: Dr. A. J. Raemdonck, Dr. J. C. Drake and Dr. Wm. H. Foster; associate membership: Dr. Edwin Schisler. These were elected by unanimous vote.

The treasurer read his report which was adopted. The report showed a fair balance in the treasury.

Dr. E. P. Buddy read the report of the executive committee, which was adopted.

Dr. C. H. Shutt made a verbal report for the committee on scientific communications.

On motion the report was adopted and referred to the executive committee for consideration and report at the next meeting.

The entertainment committee made a short verbal report.

Dr. Jerome E. Cook reported for the public health and legislation committee.

The advisory council reported the following nominations: For president, W. H. Mook and L. J. Oatman; for vice-president, W. T. Coughlin, W. R. Hewitt and Frederick Hagler; for secretary, C. Armin Gundelach and A. H. Sewing; for treasurer, T. C. Hempelmann, C. W. Thierry and W. R. Hewitt.

The election resulted as follows: President, Dr. L. J. Oatman; vice-president, Dr. Frederick Hagler; secretary, Dr. A. H. Sewing; treasurer, Dr. T. C. Hempelmann.

Dr. Taussig moved that a committee be appointed to confer with the hospital board or commissioner in regard to anything of mutual interest between them. Seconded and carried. The chair appointed Drs. Kirchner, Bailey and Falk on this committee.

Dr. Baumgarten^o moved that all non-members who read papers before the society during the past year be honored guests at our annual banquet. Seconded and carried.

It was moved, seconded and carried that the rules be suspended and the entertainment committee be empowered to act in regard to price of banquet.

Attendance 21.

T. R. AYARS, M.D., Secretary pro tem.

ST. LOUIS MEDICAL SOCIETY

Five meetings were held during the month of November. The average attendance was 120. At these meetings sixteen papers were read; among the essayists were: Dr. Shepherd Ivory Franz of the Government Hospital for the Insane, Washington, D. C.

Dr. George E. Shambaugh of Chicago read a paper entitled "Physiology of the Semicircular Canals."

Dr. Otto J. Stein of Chicago read a paper entitled "Syphilis of the Ear."

Dr. H. Kahn of Chicago read a paper entitled "A Study of the Etiology of Nasal Hydorrhea, with Case Reports."

Dr. Stanton A. Friedberg of Chicago read a paper entitled "Esophagoscopy."

The latter four papers were read at the meeting of November 29, the program being supplied by the Chicago Laryngological and Otological Society in joint session with the Section on Oto-Laryngology of the St. Louis Medical Society. Other members of the Chicago Laryngological and Otological Society present

were: Joseph C. Beck, J. R. Fletcher, Otis McClay, J. Jordan Wilson and Robert Sonnenschein.

The following resolution was adopted at the meeting of November 8:

WHEREAS, It is possible to secure from the national government antirabic serum for the free treatment of all persons bitten by dogs suspected of having rabies.

WHEREAS, The State Board of Health of Missouri has not availed itself of this privilege; therefore be it

Resolved, That the St. Louis Medical Society call on the State Board of Health to avail itself of the privilege of securing and distributing this serum.

The following response was received:

Jefferson City, Mo., Nov. 21, 1913.

Dr. F. C. E. Kuhlmann,

Secretary St. Louis Medical Society,

St. Louis, Mo.

Dear Sir:—Your letter regarding the national distribution of free antitoxin is at hand, and will say that we have been contemplating putting in the antirabies serum regardless of the offer by the national government. We will take this up some time early next year; possibly in February, so we will be prepared to meet any demands of the hot season next year.

Yours very truly,

(Signed) J. A. B. ADCOCK, Secretary.

During the month eight applicants were elected to active membership, two of which were accepted by transfer, namely: Dr. Francis M. Barnes, Jr., from the Baltimore County Medical Society of Baltimore, Maryland, and Dr. Albert A. Gebhardt from the Benton County (Arkansas) Medical Society. Others elected were: Clyde P. Dyer, John A. Flury, Otto M. Koenig, James F. McFadden, Louis H. Mestemacher and M. Hayward Post, Jr.

Dr. Henry Hanson of Kirkwood, Mo., a member of the St. Louis County Medical Society, was elected a corresponding member.

Applications for membership have been received from the following: S. A. Weintraub, Century building, proposed by S. T. Lipsitz and Randall S. Tilles; G. William Poehl, City Dispensary, proposed by Rolla Henry and Frederic Hagler; Leo Julius Kilian, St. Louis Children's Hospital, proposed by A. F. Koetter and M. B. Clopton; Thomas Bernard Butler, 320 Metropolitan building, proposed by O. H. Brown and John C. Zuercher.

The society has now 808 members in good standing and 54 who are in arrears, making a total of 862 active members. There are 16 honor members, 63 corresponding members, 6 associate members and 19 honorary members, making a total of all membership 966.

The program for the balance of the year is as follows:

Saturday, Dec. 6, 1913.

"The Mechanical Elements Concerned in Gastro-Intestinal Stasis. (By invitation)
.....Dr. R. C. Coffey, Portland, Oregon
Discussion to be opened by Dr. John Young Brown.

Saturday, Dec. 13, 1913.

1. "Demonstration of Uterine Specimen Forceps ..
.....Dr. W. C. Gayler
Discussion by Dr. Ralph L. Thompson.
2. "Medical Treatment of Advanced Pulmonary Tuberculosis".....Dr. Louis Boisliniere
3. "Artificial Pneumo-Thorax".....Dr. Albert E. Taussig
4. "Surgical Treatment of Advanced Pulmonary Tuberculosis".....Dr. Vilray P. Blair

Saturday, Dec. 20, 1913.

Program supplied by the Western Surgical Association:

1. Dr. James E. Moore, Minneapolis, Minn.
2. "Factors of Safety in Abdominal Surgery,".....
.....Dr. Chas. H. Mayo, Rochester, Minn.
3. Dr. Dean Lewis, Chicago, Ill.

The order of business at the annual meeting of the society on January 4 will be:

1. Reading of minutes.,
2. Exhibition of patients.
3. Reading of papers and discussions.
4. Exhibitions of specimens.
5. Reports of cases.
6. Reports of officers and committees.
7. Unfinished and new business.
8. Adjournment.

F. C. E. KUHLMANN, M. D., Secretary.

BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met in Dr. Dillon's office at 3 p. m., November 13, 1913, with Dr. E. H. Gist in the chair, the president, Dr. Van Allen, being absent.

Dr. J. A. Logan, of Fairfield, read a paper on "Placenta Praevia," with report of a case. His paper was divided into three classes: centralis, partialis, and marginalis. The paper was very interesting and instructive, dealing with all the complications and dangers to be met with in such cases.

Dr. E. H. Miller, president of the State Association, was with us, and, in discussing these cases, gave us a very interesting talk of methods of meeting these complications, which was enjoyed by every one present. Dr. Miller suggested the use of the rubber sack dilator, being more effective and at the same time more secure in preventing alarming hemorrhage, also the injection of salvarsan to check flooding. Dr. Miller's presence was greatly appreciated by every one; all those who were detained from the meeting lost a great treat.

Drs. Logan and Savage held a clinic in surgery. Dr. Dillon operated on a patient with tuberculous abscesses in the lumbar muscles.

Following these, the annual election of officers for 1914 was held, the following being elected: President, Dr. E. H. Gist, Frisco; vice-president, Dr. J. A. Logan, Fairfield; secretary and treasurer, Dr. J. R. Smith, Warsaw; delegate, Dr. H. G. Savage, Warsaw; alternate, Dr. Marion Dillon, Warsaw; censors, Drs. E. L. Rhodes, two years; E. F. Haynes, one year; W. G. Jones, three years.

Those present were Dr. J. A. Logan, Fairfield; Dr. E. H. Gist, Frisco; Dr. E. L. Rhodes and Dr. W. G. Jones, of Lincoln; Drs. Marion Dillon, H. G. Savage, R. L. Pomeroy, and J. R. Smith, of Warsaw; Dr. E. H. Miller honoring us as a visiting member. The meeting closed in due form to meet again the second Tuesday of January, 1914.

The evening was spent in an open meeting held at the court house, where our honored president, Dr. E. H. Miller, delivered one of his most interesting addresses to a large and appreciate audience. Our society wishes to extend its thanks and gratitude to both Dr. Miller and the State Association for his presence and help.

J. R. SMITH, M.D., Secretary

CASS COUNTY MEDICAL SOCIETY

The program for the regular meeting in Harrisonville, December 11, contains the following announcements:

1. Subject not announced, by D. S. Long, M.D.
2. "Coryza," by C. S. Dodd, M.D. Discussion.

3. "Report of a Case," by E. M. Griffith, M.D. Discussion.

4. Address by retiring president, B. B. Tout, M.D.

5. Clinics.

6. Report of Secretary-Treasurer.

7. Election of officers for 1914.

8. Miscellaneous business.

This is an important meeting as the election of officers is to be held and other important business transacted. The dues for 1914 should be paid at this meeting, or before December 31 at latest. The State Medical Association dues were raised to \$3.00 at the last meeting of the State Association, hence the dues this year will be \$4.

H. S. CRAWFORD, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Clay County Medical Society was held at Snapps Hotel, Excelsior Springs, on Monday, November 24, 1913.

Paper: "Mental Therapeutics," by Dr. F. J. Grace. Discussed by Drs. Rice and Rothwell.

Paper: "Indicanuria," by Dr. E. C. Robichaux. Discussed by Drs. Gaines and Matthews.

Paper: Subject not announced, by Dr. W. J. James. "Impression Gathered While Attending Meeting of International Congress of Surgeons," by Dr. W. S. Wallace.

This was an interesting meeting.

F. H. MATTHEWS, M.D., Secretary.

FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society was called to order by its president, Dr. W. P. Mattox, in the offices of Dr. H. A. Booth, Pacific, at 6 p. m., November 4, 1913.

The following members were present: Drs. C. F. Briegleb, H. A. Booth, J. P. Dunigan, W. F. Einbeck, John Isbell, W. P. Mattox, A. L. McNay, O. L. Muench, O. N. Schudde, and H. A. May.

Visitors: Dr. E. J. Goodwin, Secretary Missouri State Medical Association, St. Louis, and Dr. W. S. Rutherford, Sullivan.

The treasurer's report, showing a balance of \$36.68 in the treasury was accepted and approved.

The treasurer was directed to reimburse himself in the amount of \$5 for inadvertent over-deposit to the credit of the society.

The action of the secretary in certifying membership of Dr. O. N. Schudde to the secretary of the State Association was approved. Notice of increase of yearly society dues from \$2.50 to \$3.50 was made by the secretary, and by vote of the society the increase in dues was accepted and \$3.50 made the regular annual society dues.

Election of officers for the year 1914 resulted as follows: President, Dr. O. L. Muench, Washington; vice-president, Dr. W. F. Einbeck, New Haven; secretary and treasurer, Dr. H. A. May, Washington. Dr. H. A. Booth, Pacific, is delegate to the state convention and Dr. C. F. Briegleb, St. Clair, is alternate, both having been elected in 1912 for two years. Dr. A. L. McNay was elected censor for three years in place of Dr. W. P. Mattox, whose term of office as censor expires with this year. The present board of censors, with indicated time to serve, is as follows: Dr. J. P. Dunigan, one year; Dr. H. A. May, two years; and Dr. A. L. McNay, three years.

The society voted to adopt a resolution remonstrating against the appointment of Dr. Sexert as local registrar at Washington, and it was suggested and carried that these resolutions be prepared and formally adopted at a special meeting of the society to be held some time during the month of December, 1913.

The case of W. C. Humfeld, a chiropractor of Washington, was taken up and discussed, and the following resolutions adopted:

WHEREAS, It appears that one W. C. Humfeld is now practicing medicine as a chiropractic, a science, if such it may be termed, not recognized by the medical profession of this state, and contrary to the laws of this state, and

WHEREAS, The highest court in this state has held that anyone practicing as a chiropractic within this state, is attempting to practice medicine within the spirit of statutes of this state and contrary to the statute requiring all medical practitioners to obtain a license in form and manner provided by law, and

WHEREAS, One of the chief purposes of this society is to uphold the ethics of the profession and protect the people from fraud, therefore be it

Resolved, That the secretary be empowered in behalf of the society to request the prosecuting attorney to institute the proper proceedings against said W. C. Humfeld for practicing medicine without a license in this state and county.

That should the prosecuting attorney refuse to file an information against said W. C. Humfeld in his capacity as prosecuting attorney, that the secretary be empowered to file complaint against said W. C. Humfeld for practicing medicine without a license in this state and county, in behalf of the members of this society.

Dr. W. S. Rutherford, Sullivan, Mo., applied, in due form, for membership in the society.

The visit of Dr. Goodwin was much appreciated by the society.

By vote of the society, the next regular meeting will be held in Union, on the first Tuesday in February, 1914. Due notice of the meeting will be given by the secretary.

H. A. MAY, M.D., Secretary.

HICKORY COUNTY MEDICAL SOCIETY

The Hickory County Medical Society held its regular meeting at Wheatland, December 2, 1913. The following officers were elected for 1914: President, H. C. Brookshire, Hermitage; vice-president, T. D. Wrinkle, Pittsburg; secretary, R. C. Nevins, Wheatland; treasurer, J. W. Murray, Quincy; delegate, T. D. Wrinkle, Pittsburg; Alternate, H. C. Brookshire, Hermitage; board of censors, T. D. Wrinkle, for three years; C. V. Steward, Elkton, for two years; J. W. Murray, for one year.

Paid-up members: H. C. Brookshire, T. D. Wrinkle, C. V. Steward, J. W. Clark, R. C. Nevins, J. W. Murray, W. U. Hodges, G. C. Losey (deceased). Visitors: Drs. Johnson and Fisher. There are no delinquents.

Dr. George C. Losey read a very interesting paper on "Pneumonia," which was freely discussed by the members.

The meeting was a very interesting and instructive one, but the members were saddened and deeply grieved the next day when informed of the sudden death of our esteemed member, Dr. George C. Losey, while on his way home from the meeting. The doctor had started home after the adjournment of the society, and when about a quarter of a mile from town his buggy was overturned and fell upon him in such a manner as to cause his death. I was summoned at once to hold an inquest, this being my first case since election as county coroner, and the fact of having to pass upon the death of a brother physician was a saddening circumstance for me. Dr. Losey was an able physician well beloved by his patients and possessed the confidence and affection of the physicians of the county. His loss will be felt by all.

R. C. NEVINS, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

Meetings and Programs.—General Section: Sessions are held in the rooms of the Kansas City Medical Library on the thirteenth Floor of the Rialto Building, Ninth Street and Grand Avenue, Tuesday evenings, at 8 p. m. Both phones, Main 1769.

Visitors welcome to professional programs.

TUESDAY NIGHT, NOV. 25, 1913

Symposium on The Tonsil.

1. The Pathologic Tonsil, Hugh Miller.
 2. Systemic Infections Arising From Tonsil, J. Q. Chambers.
 3. Influence of Tonsil on Child, F. C. Neff.
 4. Effect of Tonsillar Hypertrophy on the Jaws and the Dental Arch, W. J. Brady, D.D.S.
- (Papers limited to fifteen minutes.)

TUESDAY NIGHT, DEC. 2, 1913

Election of officers.

TUESDAY NIGHT, DEC. 9, 1913

1. Auto-Intoxication, Geo. H. Hoxie. Discussion opened by J. F. Binnie.

Eye, Ear, Nose and Throat Section.—Meeting to be held December 11, 1913, in the Library Room, Rialto Building.

1. Presentation of Cases, Specimens, etc.
2. Sarcoma of the Choroid, with Report of a Case, J. W. McKee.
3. The Ocular Complications of Locomotor Ataxia, J. H. Thompson.
4. Corneal Opacities: Causes and Treatment, J. W. Howard.

The following men were elected to membership: David B. Robinson, Bryant Building; recommended by Scott P. Child, Frank C. Neff and A. W. McAlester. L. A. Marty on a transfer from the Central Kansas Medical Society; recommended by J. D. Griffith, Howard Hill and P. T. Bohan. Walter Murphy on a transfer from the Chicago Medical Society, and recommended by W. C. Willets and W. J. Walker. Fred C. Rumsey, on a transfer from the Logan County (Okla) Medical Society.

Application for membership was read from B. L. Sulzbacher; recommended by Howard Hill, W. J. Friek and J. F. Binnie; it was received and referred to the board of censors.

To the great regret of the membership, the society has had to accept, due to change of residence, the resignation of Dr. W. J. Walker, for the past year our very efficient and faithful secretary.

Dr. Walker represents in mental and moral equipment a rare type of man, but one which this particular period of intellectual and social progress is developing and bringing into the open. The Jackson County Medical Society has been very fortunate indeed in having him, even for so short a term, for its secretary and editor. And now that the annual election of officers is upon us, and Dr. Walker cannot be reelected, it should be our purpose to select as nominees only those competent and well disposed members, who bring to such office the time, the qualifications and disposition to maintain and to improve upon the standard set. The position of secretary to the Jackson County Medical Society, and editor of the weekly *Bulletin*, implies the need of great versatility, unlimited breadth and tact, and a knowledge in many fields other than that of medicine. In other words, the position of secretary indicates a man of superior ability and judgment with a true spirit of service.

The above, bearing upon the office of secretary in no way lessens the importance of the other officers to be elected, but only accentuates the need of awakened interest in the annual election.

OFFICERS FOR 1914

The annual election of the society was held Tuesday evening December 2. The following officers were elected: President, Richard L. Sutton; vice-president, L. N. Frankenberger; treasurer, Wm. F. Kuhn; secretary, H. Lewis Hess. The election of a member of the board of censors to succeed Dr. Van Eman was passed, thus continuing Dr. Van Eman. Dr. Robert Schaufler was reelected to succeed himself, and Dr. Wm. Frick was elected to succeed Dr. Richard L. Sutton on the executive council. They will serve during the years 1914, 1915 and 1916. Drs. J. D. Griffith, F. E. Murphy and William Frick were reelected as delegates to serve during the years 1914 and 1915.

JASPER COUNTY MEDICAL SOCIETY

The Jasper County Medical Society held its regular election of officers for 1914 in the Carnegie Library at Joplin, December 2, 1913. Dr. R. L. Neff was elected president; Dr. H. R. Lucas, vice-president; Dr. A. N. Bobbitt, secretary; Dr. M. C. Shelton, treasurer; Dr. O. S. Willfey, censor; Dr. J. B. Taulbee, delegate; Dr. C. C. Cummings, alternate. At this meeting several committees were appointed in preparation for the state meeting in Joplin in May. The chairmen of the various committees follow:

Committee on arrangements, Dr. J. B. Taulbee, Joplin, Mo.; committee on finances, Dr. M. C. Shelton, Joplin; committee on hotels, Dr. R. M. James, Joplin. The above named committees will be glad to hear any suggestion from, and give information to, members over the state in reference to the coming meeting.

The Jasper County Society is in especially robust condition at present and is looking forward with pleasure to entertaining the State Association in Joplin. The hotel accommodations are good here, and we are looking for a record-breaking attendance.

A. N. BOBBITT, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

A "BETTER BABY" CONTEST

The Johnson County Medical Society at the request of the Women's Club of Warrensburg, measured the babies in a "Better Babies Contest," held under the direction of Johnson County Bureau of Agriculture.

Saturday afternoon, November 29, in connection with the contest, the Johnson County Medical Society held an open session at the State Normal School building. Three physicians were on the program for papers, but only one responded, Dr. Wm. R. Patterson, who read a paper entitled, "Better Babies." He insisted that the medical profession should take its recognized place among the foremost educators in an endeavor to eliminate every tendency to race degeneracy, and that each physician be willing and qualified to contribute his quota in molding and in guiding public opinion toward a desire for race improvement. The birth of better babies he deems the center of the world's progress and that parenthood should be esteemed an exalted privilege of life. That defects, whether inherited or acquired, that endanger health offspring, should be a bar to marriage, that too large a proportion of all new-born babies are deprived of a child's natural birthright—that of a sane mind and a healthy body; and that intervention any time after conception or birth may be too late.

It was urged that conditions that add to the sum total of human misery should not be justified, and that lofty personal sentiment and civic morality should not tolerate the most murderous influence upon the welfare of the race—prostitution, venereal diseases and alcoholism, each largely the result of the other.

An evening session was held in the Normal School auditorium, at which time Dr. Herman E. Pearce, of Kansas City, Mo., delivered a public lecture on "The School Child's Welfare." A large and appreciative audience was in attendance and Dr. Pearce maintained his reputation as an entertainer and an instructor in matters of health and development of school children.

The society held its regular quarterly meeting Tuesday, December 9, at the court house. The meeting was called to order by the president, Dr. Wm. R. Patterson, with Dr. O. B. Hall acting as secretary.

There was no program, except a discussion of better methods for collecting and of arranging uniform prices for country practice. Each physician present entered into the discussion and a profitable meeting was held.

This was the time for the annual election of officers, which resulted as follows: President, Dr. Henry Park; vice-president, Dr. D. C. Adeock; secretary and treasurer, Dr. O. B. Hall; delegate, Dr. Wm. R. Patterson; censor for three years, Dr. G. W. Thompson; censor for unexpired term of Dr. Z. Case, deceased, Dr. L. J. Schofield.

No further business appearing, the meeting adjourned until the second Tuesday in March.

O. B. HALL, M.D., Secretary.

LAFAYETTE COUNTY MEDICAL SOCIETY

The Lafayette County Medical Society met in regular monthly meeting at Odessa, in Dr. Dawson's office. The president, Dr. W. A. Braecklein, in the chair. After reading and adopting of minutes of previous meeting, the program was taken up.

Dr. John Mann reported a case of primary pericarditis which was extensively discussed, as primary pericarditis is of rare occurrence.

Dr. Dawson read a paper on diagnosis of skin diseases.

Dr. Ott presented some pathological specimens.

The entire program was discussed with much interest and benefit to those present. Dr. Dawson presented a clinic in the person of a little girl five years old with mitral regurgitation in which compensation had been established.

This session being the time of the annual election of officers, the society then proceeded to elect for the ensuing year. Dr. McCord G. Roberts, of Lexington, was elected president; Dr. A. J. Chalkey, Lexington, first vice-president; Dr. Wm. C. Webb, Higginsville, second vice-president; Dr. W. A. Braecklein, Higginsville, secretary-treasurer; Dr. Geo. W. Fredendall, Lexington, delegate; Dr. C. A. Nickell, Mayview, a member of the board of censors.

Those present at this meeting were: Drs. Braecklein, Cope, Chalkey, Clayton, Carthrac, Sr., Carthrac, Jr., Downing, Dawson, Fredendall, Fulkerson, John Mann, Frank Mann, Moore, Mills, Oetting, Ott, Roberts, Ryland, Schneider, Schreiman, Webb.

FERDINAND SCHREIMAN, M.D., Reporter.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Crane, December 2, 1913. After roll-call the following officers for 1914 were elected: President, Dr. H. L. Kerr, Crane; vice-president, Dr. W. S. Loveland, Verona; secretary, Dr. R. C. Robertson, Aurora; treasurer, Dr. F. S. Stevenson, Aurora.

Dr. W. I. Fulton, formerly of Springfield, was elected a member of the society. The following program was rendered:

1. Report of a case, by Dr. H. L. Kerr, Crane.
2. "The Peculiarities of Pneumonia," by Dr. J. P. Andrews, Marionville.

3. "Value of Wassermann Test in Treatment," by Dr. Murray C. Stone, Springfield.

4. "La Grippe and Some of Its Sequelae," by Dr. W. S. Loveland, Verona.

5. "Surgery and Obscure Menstrual Troubles," by Dr. H. A. Lowe, Springfield.

6. "Home Care of Tuberculosis," by Dr. C. W. Shelton, Mt. Vernon.

The following members were present: Drs. Stevenson, Fulton, Holmes, Shelton, Smart, Adams, Wade, Andrew, Harris, Kerr, Henson, Robertson and Baird. The next meeting will be held at Aurora, March 3, 1914.

R. C. ROBERTSON, M.D., Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society met December 2, 1913, in the office of the secretary, Dr. E. M. Bartlett, first vice-president, presiding. The following were in attendance: Drs. Hetherlin, Lewellen, Bartlett, Dreyfus, Davis and Keeling; Dr. E. J. Goodwin, the state secretary, being a guest of the society and imparting to us some valuable information.

Annual reports of treasurer and secretary were read and approved. The reports follow:

SECRETARY'S REPORT

I beg leave to submit the following report for year ending December 31, 1913:

Number of members in good standing, 17.

Number delinquent, 1.

Number of new members admitted, 3.

Number of members transferred, 2.

Number of members dropped for non-payment of dues, 2.

Number of meetings held, 9.

Average attendance, 7.

Number of papers read, 9.

Number of cases reported, 5.

Number of patients examined by members of society, 12.

Respectfully submitted,

F. V. KEELING, Secretary.

TREASURER'S REPORT

Total receipts for 1912 and 1913...\$75.65

Total disbursements 53.65

Balance on hand, \$22.00

J. W. DREYFUS, Treasurer.

This being the time of election of officers for the year 1914, the following were elected:

President, Dr. E. M. Bartlett, Clarksville; first vice-president, Dr. T. G. Hetherlin, Louisiana; second vice-president, Dr. J. H. Story, Clarksville; third vice-president, Dr. C. P. Lewellen, Louisiana; secretary, Dr. F. V. Keeling, Elsberry; treasurer, Dr. J. W. Dreyfus, Louisiana; censors, Dr. C. L. Blankhead, three years; Dr. J. W. Dreyfus, two years; Dr. J. D. Davis, one year; committee on By-Laws, Dr. T. G. Hetherlin and Dr. R. J. Guy; committee on public health, Drs. Dreyfus, Lewellen and C. E. Gibbs; Dr. Gibbs being selected as county committeeman on public health.

The following amendment to the By-Laws was proposed:

That Section 1 of Chapter V be amended to read that the admission fee shall be four dollars instead of two dollars; that Section 2 of Chapter V be amended to read four dollars instead of one dollar.

The following program was formulated for the next meeting:

Papers by Drs. Lewellen, Hardin, Kennedy and Davis.

Society adjourned to meet in Clarksville, January 5, 1914.

F. V. KEELING, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

Regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, November 19, and in the absence of Dr. A. L. Gray, the meeting was presided over by Dr. O. B. Campbell, until the arrival of Dr. A. L. Gray, later. Forty-two members present.

On motion of Dr. Holley, seconded by Dr. T. E. Potter, the chair was instructed to appoint a committee of three to visit Kansas City and call on Dr. W. T. Elam, also his attorneys, and tender to the doctor every assistance at the command of the medical society. The following committee was named: Drs. Ladd, Bansbach, Holley. This motion was carried unanimously and the committee was instructed to add as many more to their number as they deemed advisable.

Dr. Stevenson called attention to the fact that the doctors of St. Joseph were subject to the "speed limit regulations," and were in danger of being arrested and fined if they exceeded the regular speed limits permitted on our streets, no matter whether they were engaged in an emergency call or not. The secretary was instructed to call the attention of the public health and legislation committee to this fact, and have them appear before council with a request that physicians be permitted to use their judgment as to the question of speed when making emergency calls.

The date for the annual banquet was set for Wednesday evening, December 17, and the following committee appointed to make all necessary arrangements: Drs. T. J. Lynch, J. J. Bansbach, F. Ladd.

Dr. Caryl Potter had a very interesting paper on the "Etiology and Prognosis of Pernicious Anemia," which was discussed by the following: Drs. Paul Forgraves, L. S. Long, W. L. Kenney, F. X. Hartigan, D. Morton, O. B. Campbell, P. I. Leonard. Discussion closed by Dr. Caryl Potter.

Dr. O. B. Campbell and Dr. J. J. Bansbach gave interesting accounts of the proceedings at Chicago, while attending the clinics during the past week.

MEETING OF DECEMBER 3.

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms, Wednesday evening, December 3, 1913. President A. L. Gray in the chair. 46 members present.

The application for membership from Drs. Tucker and W. J. Bell were presented and referred to the board of censors.

The committee consisting of Drs. Lynch, Bansbach and Ladd, appointed to arrange for the society's annual banquet, reported that they had made arrangements with the Hotel Robidoux for a \$3.50-per-plate banquet to be held at 7:30 p. m., December 17, 1913. The committee's report was accepted and they were instructed to complete all necessary arrangements.

The president reported having been notified that Drs. Hansler and Gray had handed in their resignations as lodge physicians for the St. Joseph Lodge Loyal Order of the Moose. The secretary was instructed to present this communication at the next regular meeting.

Dr. Bransom submitted samples of "Cold Tablets" distributed promiscuously throughout the residence district of St. Joseph, and on motion of Dr. Morton, seconded by Dr. Bransom, the secretary was instructed to bring this matter to the attention of the proper authorities.

At the suggestion of Dr. Ladd, the president instructed the tuberculosis committee to send out another batch of tuberculosis literature for distribution to the children of the public schools.

The executive committee reported having had an attorney draw up a petition to the Secretary of the State Board of Health and file charges against the concern known as the St. Joseph Health Exhibit. The

committee, however, could not agree and the document was referred to the executive committee to be appointed for the year 1914.

On motion of Dr. Beck, seconded by Dr. Chas. Geiger, Judge Randolph of St. Joseph was invited to meet with this society at their next regular meeting.

The society proceeded to the annual election of officers for the year 1914, with the following result: President, Dr. J. J. Bansbach; first vice-president, Dr. F. H. Spencer; second vice-president, Dr. F. H. Ladd; secretary, W. F. Goetze; treasurer, Dr. J. M. Bell; censor, Dr. G. A. Lau, three-year term, 1914, 1915, 1916; censor, Dr. J. M. Doyle, unexpired term of Dr. Bansbach, 1914-1915; delegate, Dr. Daniel Morton, 1914-1915; alternate, Dr. A. E. Holley, 1914-1915.

A vote of thanks was tendered the retiring president.
W. F. GOETZE, M.D., Secretary.

TEXAS COUNTY MEDICAL SOCIETY

The Texas County Medical Society held its annual meeting at Houston and elected the following officers for 1914:

President, R. B. Tilley, Plato; vice-president, S. W. Harman, Elk Creek; secretary, Leslie Randall, Licking; treasurer, E. P. Blankenship, Houston.

The society took steps to prosecute illegal practitioners and filed charges with the prosecuting attorney against several persons practicing medicine without license. The next meeting will be held at Houston, January 8, 1914.

THE TRUTH ABOUT MEDICINES

This department presents, in concise form, facts about the composition, quality and value of medicines. Under "Reliable Medicines" appear brief descriptions of the articles found eligible by the A. M. A. Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies." Under "Reform in Medicines" appear matters, tending toward honesty in medicines and rational therapeutics, particularly the reports of the A. M. A. Council on Pharmacy and Chemistry and of the Chemical Laboratory.

The text on which these abstracts are based may be obtained from the American Medical Association, 535 N. Dearborn Street, Chicago, Ill.

RELIABLE MEDICINES

Articles found eligible by the Council on Pharmacy and Chemistry for inclusion with "New and Nonofficial Remedies."

AGGLUTINATING SERA FOR DIAGNOSTIC PURPOSES.—These are the sera of animals (horses) immunized against various bacteria. For use a solution is added to a suspension of the bacterium to be tested, and after incubation for a certain period the mixture is examined.

AGGLUTINATING SERUM FOR THE IDENTIFICATION OF BACILLUS PARATYPHOSUS A.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa.

AGGLUTINATING SERUM FOR THE IDENTIFICATION OF PARATYPHOSUS B.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa.

AGGLUTINATING SERUM FOR THE IDENTIFICATION OF BACILLUS TYPHOSUS.—Intended for use by the macroscopic method. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Nov. 1, 1913, p. 1630).

ANTISTREPTOCOCCIC VACCINE (SCARLATINA PROPHYLACTIC).—For description of Streptococcus Vaccine see N. N. R., 1913, p. 226. The Abbott Alkaloidal Co., Chicago.

STREPTO-BACTERIN (SCARLATINA BACTERIN) POLYVALENT.—For description of Streptococcus Vaccine see N. N. R., 1913, p. 226. The Abbott Alkaloidal Co., Chicago (*Jour. A. M. A.*, Nov. 15, 1913, p. 1811).

SILK PEPTONE "HOECHST."—Peptone made from silk and standardized to a uniform rotatory power. It is used for the detection of peptolytic ferments, either by changes in optical activity or by the precipitation of tyrosin produced by its digestion. Farbwerke Hoechst Co., New York (*Jour. A. M. A.*, Nov. 15, 1913, p. 1811).

ACNE-BACTERIN POLYVALENT.—For description of Acne Vaccine see N. N. R., 1913, p. 221. Abbott Alkaloidal Co., Chicago.

COLI-BACTERIN POLYVALENT.—For description of Bacillus Coli Vaccine see N. N. R., 1913, p. 221. Abbott Alkaloidal Co., Chicago.

FRIEDLANDER BACTERIN POLYVALENT.—For description of Friedlander Vaccine see N. N. R., 1913, p. 222. Abbott Alkaloidal Co., Chicago.

GONOCOCCUS-BACTERIN POLYVALENT.—For description of Gonococcus Vaccine see N. N. R., 1913, p. 223. Abbott Alkaloidal Co., Chicago.

PNEUMO-BACTERIN POLYVALENT.—For description of Pneumococcus Vaccine see N. N. R., 1913, p. 224. Abbott Alkaloidal Co., Chicago.

STAPHYLO-ACNE-BACTERIN POLYVALENT.—For description of mixed vaccines see N. N. R., 1913, p. 224. Abbott Alkaloidal Co., Chicago.

STAPHYLO-ALBUS-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

STAPHYLO-AUREUS-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

STAPHYLO-BACTERIN (HUMAN) ALBUS-AUREUS-CITREUS.—For description of Staphylococcus Vaccines see N. N. R., 1913, p. 225. Abbott Alkaloidal Co., Chicago.

STREPTO-BACTERIN (SCARLATINA BACTERIN) POLYVALENT.—Abbott Alkaloidal Co., Chicago.

ANTISTREPTOCOCCIC VACCINE (SCARLATINA PROPHYLACTIC).—Abbott Alkaloidal Co., Chicago.

STREPTO-BACTERIN (HUMAN) POLYVALENT.—For description of Streptococcus Vaccines see N. N. R., 1913, p. 226. Abbott Alkaloidal Co., Chicago.

TYPHO-BACTERIN POLYVALENT.—Abbott Alkaloidal Co., Chicago.

TYPHOID PROPHYLACTIC.—For description of Typhoid Vaccine see N. N. R., 1913, p. 227. Abbott Alkaloidal Co., Chicago (*Jour. A. M. A.*, Nov. 22, 1913, p. 1900).

ARHEOL.—Arheol is santalol, the chief constituent of sandalwood. Its action is the same as that of sandalwood oil, but is claimed not to cause disturbance of the stomach or the kidneys. Arheol is marketed only in the form of Arheol Capsules, 0.2 Gm. Alexandre Astier, Paris, France (*Jour. A. M. A.*, Nov. 22, 1913, p. 1900).

REFORM IN MEDICINES

DEAFNESS-CURE FRAUDS.—The name of the deafness cure quack is legion. Some carry an alleged cure for deafness as a "side-line," some sell on the mail-order plan their worthless "course of treatment" while still others, and these probably are in the majority, dispose of, at an exorbitant price, devices that are trivial, worthless and often dangerous. The following are some "deafness cure" concerns: Dr. L. C. Grains Company (formerly Dr. Guy Clifford Powell), Chicago, Dr. Edward E. Gardner, New York City, George P. Way, Detroit, Mich., and George H. Wilson, Louisville, Ky. (*Jour. A. M. A.*, Nov. 1, 1913, p. 1645).

THE FRIEDMANN CURE.—After studying the cases inoculated by Dr. Friedmann at Montreal, Ottawa, Toronto and London, Ontario, a committee of the Canadian Association for the Prevention of Tuberculosis has reported unfavorably on the treatment (*Jour. A. M. A.*, Nov. 1, 1913, p. 1648).

TRYPSOGEN.—Besides exploiting a clay poultice, "Antithermoline," the G. W. Carnick Company appears to be chiefly concerned in the promotion of "internal secretion" specialties. Thus it markets the diabetes remedy, "Trypsogen" tablets, said to contain "the enzyme of the islands of Langerhans with the tryptic and amylolytic ferments of the pancreas" along with gold bromid and arsenic bromid; Secretogen Elixir, said to be "prepared from gastric secretin obtained from the pyloric antrum and pancreatic secretin from the duodenum, combined with the enzymes of the peptic glands, and one-twentieth of one per cent HCl "; Secretogen Tablets, said to be "prepared from prosecretin and succus entericus obtained from the epithelial cells of the duodenum, combined with pancreatic extract"; Kinazyme, "a preparation of extract of spleen, reinforced with trypsin, amylase and calcium lactate." While great claims have been made for Trypsogen and while it has been most widely advertised, it is the opinion of the most eminent students of the question that pancreas is not efficacious in diabetes. Trypsogen should be considered as an unscientific shotgun mixture. When the Council on Pharmacy and Chemistry paid less attention to the therapeutic worth of a proprietary preparation, both Antithermoline and Trypsogen were admitted to New and Nonofficial Remedies. They were dropped some years ago, when the Council revised its rules (*Jour. A. M. A.*, Nov. 1, 1913, p. 1649).

RADIO-ACTIVE WATERS.—All naturally occurring waters, even rain water, are somewhat radio-active. While the waters of Hot Springs, Ark., have been investigated by the Department of the Interior, this information has been suppressed "for administration reasons." It is stated only that the waters are "radio-active to a marked degree," a statement which might have emanated from a patent medicine manufacturer (*Jour. A. M. A.*, Nov. 1, 1913, p. 1649).

THERAPEUTIC NAMES.—Claiming that physicians demand that they be supplied with "a pill for every ill" most pharmaceutical houses supply "Pills Gonorrhea," "Pills Spermatorrhea," "Pills Leukorrhea," "Pills Dysmenorrhea," etc. Therapeutically suggestive names for medicines lead to thoughtless use by physicians and to counter-prescribing druggists. That the use of therapeutic titles is not an economic necessity is illustrated by the fact that E. R. Squibb & Sons

are discarding such titles (*Jour. A. M. A.*, Nov. 1, 1913, p. 1650).

MOUTH WASHES.—Recent investigations seem to show that adherence of mucin caused decay of the teeth. So-called antiseptic mouth washes and alkaline washes do not remove this mucin and therefore do not prevent decay of the teeth. The vegetable acids such as fruit juices and diluted vinegar are the most successful agents for the removal of mucin (*Jour. A. M. A.*, Nov. 8, 1913, p. 1718).

PENNYROYAL, TANSY AND OTHER. "EMMENAGOGUE OILS."—An examination of the oils of pennyroyal, tansy, savin, rue, thyme, turpentine and of apiol proves that they have no specific or directly stimulating action whatever on the uterine muscles; on the contrary they inhibit the contraction of the uterus and even paralyze it. If these oils exhibit any emmenagogue or abortifacient action whatever, it is due to a general constitutional poisoning or gastro-intestinal irritation and not to any specific action in accord with the intent for which they are sometimes administered (*Jour. A. M. A.*, Nov. 8, 1913, p. 1725).

MOUTH WASHES.—Such polypharmacy as is represented by the complex solutions, official and proprietary, used as mouth washes is nonsense. In them the value of useful ingredients is obscured by the useless shrubbery which surrounds them. A dash of this and a dash of that in these mouth washes or gargles is simply playing to the galleries (*Jour. A. M. A.*, Nov. 15, 1913, p. 1812).

THE ACTION OF ATOPHAN.—It has been recognized that the administration of Atophan increased the elimination of uric acid and that there was a possibility that a greater production of uric acid is induced by the drug—a result which would scarcely encourage its use in therapy. Recent investigations, however, favor the view that the drug merely stimulates the kidneys to abstract from the blood a greater quantity of the purin end-product than it normally would (*Jour. A. M. A.*, Nov. 15, 1913, p. 1818).

BAUGHN'S PELLAGRA REMEDY.—A booklet issued for Baughn's Pellagra Remedy, American Compounding Co., Jasper, Alabama, suggests symptoms of all kinds as an indication of pellagra. If you have any of these, the inference is that the "grim specter," pellagra, has you in its grasp! Horror is piled on horror in the most approved "patent medicine" style, reaching as a grand climax a description of "the last stages" and closing with the peroration: "And the last stage, till now—the MAD HOUSE and DEATH." As the exploitation of this nostrum interfered with the attempts of health officers to eradicate pellagra in Alabama, it was analyzed in the A. M. A. Chemical Laboratory. The nostrum comes in two forms, capsules and a powder for external use. The capsules were found to contain charcoal, basic iron sulphate and a little quinine. The powder was composed of common salt and basic iron sulphate (*Jour. A. M. A.*, Nov. 15, 1913, p. 1828).

REGULIN.—Regulin is agar-agar (N. N. R., 1913, p. 20) to which some cascara preparation has been added. The product at one time was described in the Appendix to New and Nonofficial Remedies as follows: A mixture of agar-agar in a dry form with extract of cascara sagrada representing 15 per cent. of an aqueous fluid-extract of cascara sagrada (*Jour. A. M. A.*, Nov. 15, 1913, p. 1832).

WATERBURY'S COMPOUND.—Waterbury's Compound—called Waterbury's Metabolized Cod-Liver Oil Compound until the A. M. A. Chemical Laboratory showed it contained practically no cod-liver oil—was one of the proprietary preparations advertised both in "display" form and also in the form of an "original article," in the *Army and Navy Medical Record*—a fraudulent publication that offered its editorial pages for sale. Physicians are now receiving from the Waterbury Chemical Company, a reprint of what purports to be an editorial from the *Army and Navy Medical Record* entitled, "One of America's Most Valuable Preparations." The preparation, of course, is "Waterbury's Compound" (*Jour. A. M. A.*, Nov. 15, 1913, p. 1830).

SENSITIZED VIRUS-VACCINE.—Besredka asserts that the injection of living germs sensitized in certain ways produces a more substantial immunity and greater production of antibodies than the injection of germs killed by heat or in other ways. In apes sensitized typhoid bacilli gave absolute protection, causing no fever or reaction, while killed bacilli failed to protect adequately. As a result of these experiments a number of "sensitized virus-vaccines" have been prepared and the antirabic vaccine used in France is now a sensitized virus. Before the employment of the sensitized typhoid virus-vaccine can be considered, much evidence must be produced that there is no danger of producing typhoid carriers and that this vaccine gives any better protection than the vaccine now in use. Similar objections hold against other vaccines of this kind and at present the obstacle to the use of such living germs for protective purposes would seem to be quite impassable (*Jour. A. M. A.*, Nov. 15, 1913, p. 1814).

BERLEDETS.—This is an anti-fat remedy sold under the claim that dieting and exercise are unnecessary, but directions for which recommends moderation in diet and free exercise. Examination in the A. M. A. Chemical Laboratory showed the nostrum to consist of tablets, each containing about 9 grain of boric acid, along with corn starch and milk sugar. It is evident that Berledets will cure obesity only by seriously interfering with digestion (*Jour. A. M. A.*, Nov. 22, 1913, p. 1917).

THE MORLEY EAR-PHONE.—The Morley Invisible Ear-Phone, Morley Company, Philadelphia, Pa., is nothing more or less than the old, well-known Toynbee artificial drum-head. It consists of a circular piece of oiled silk about one-quarter inch in diameter, through the center of which a piece of silk thread has been passed, for the purpose of holding the oiled silk in position. A small piece of flexible tubing comes with it to aid in inserting the device in the ear. The indiscriminate sale of a device of this sort, especially at exorbitant prices and under fraudulent claims, is not merely an injury to the purse, but a distinct menace to the health of the deaf (*Jour. A. M. A.*, Nov. 22, 1913, p. 1919).

VEROFORM GERMICIDE OMITTED FROM N. N. R.—Veroform Germicide is described in New and Nonofficial Remedies, 1913. It is a formaldehyde soap solution, containing 20 per cent. of formaldehyde. The report of the U. S. Public Health Service on commercial disinfectants having shown Veroform Germicide to have a phenol coefficient of but 0.43, the manufacturers of the preparation were asked to present evidence to justify the term "germicide" in the name and the claim that it has more bactericidal effect than phenol. As the Veroform Co. produced no evidence to substantiate the questioned claims, the Council on Pharmacy and Chemistry voted to omit the preparation from New and Nonofficial Remedies (*Jour. A. M. A.*, Nov. 22, 1913, p. 1920).

BOOK REVIEWS

SURGERY OF THE EYE. A HAND-BOOK FOR STUDENTS AND PRACTITIONERS. By Ervin Török, M.D., Surgeon to the New York Ophthalmic and Aural Institute; Ophthalmic Surgeon to Beth Israel Hospital; Consulting Ophthalmologist to the Tarrytown Hospital, and Gerald H. Grout, M.D., Assistant Surgeon to the New York Ophthalmic and Aural Institute; Instructor in the Eye Department, Vanderbilt Clinic; Consulting Ophthalmologist to the Bellevue Hospital, First Division. Octavo, 507 pages, with 509 original illustrations, 101 in colors, and 2 colored plates. Cloth, \$4.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

In this book the authors have succeeded admirably in their intention of "producing a thoroughly practical work on the surgery of the eye." The reader is impressed with the common sense that has guided the selection of subject matter and simplicity with which it is presented both in text and illustration. Apparently no effort has been made to describe rare or unusual operations, but at the same time nothing seems to have been neglected that is essential to a clear understanding of practical every-day ophthalmic surgery.

The first two chapters are devoted to a consideration of general surgical methods, and their application to the special problems of eye surgery. Preparation of patient, operators, instruments and dressings are discussed briefly but in a manner that covers the ground effectively. The subsequent twelve chapters are concerned with ocular surgery. Technical description of each operation is preceded by a short discussion of the disease or condition the operation is expected to relieve. The operation is then described in detail, the different steps being explained with numerous and excellent illustrations. The usual postoperative instructions follow.

The authors are to be congratulated upon the production of a work that will be of interest to every student of ophthalmology.

THE PRACTITIONER'S VISITING LIST for 1914. An invaluable pocket-sized book containing memoranda and data important for every physician, and ruled blanks for recording every detail of practice. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil with rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Thumb-letter index, 25 cents extra. Descriptive circular showing the several styles sent on request. Lea & Febiger, Publishers, Philadelphia and New York.

The Practitioner's Visiting List is in its thirtieth year and embodies the results of long experience and study devoted to its development and perfection.

It is issued in four styles: "Weekly," dated for 30 patients; "Monthly," undated for 120 patients per month; "Perpetual," undated, for 30 patients weekly per year, and "60 Patients," undated, for 60 patients weekly per year.

ESSENTIALS OF PRESCRIPTION WRITING. By Cary Eggleston, M.D., Instructor in Pharmacology, Cornell University Medical College, New York City. 32 mo of 115 pages. W. B. Saunders Company, 1913. Cloth, \$1 net.

A handy little book containing much useful information on prescription writing.

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ORIGINAL ARTICLES

TUBERCULIN TREATMENT *

W. W. DUKE, M.D.
KANSAS CITY, MO.

I wish to confine my paper this evening to the therapeutic use of tuberculin simply for the sake of brevity, and hope you will not misunderstand me and think that I do not give proper value to other factors in the treatment, such as rest, hydrotherapy, diet, etc. The importance of these measures, of course, cannot be overestimated. What I do wish to point out is that tuberculin properly used is a valuable aid in the treatment, especially in selected cases, and is employed far too little in the middle west.

The use of tuberculin has been increasing rapidly, especially during the past ten years, and at the present time is an important part of the treatment in the vast majority of sanatoriums for tuberculosis in Europe and America. It is recommended by such men as Sahli, A. E. Wright, Wolff-Eisner, Bandelier and Roepke, Newmann, Riviere and Morland in Europe, and in America especially by Hamman and Wolman, Miller, Hawes, Floyd and others. Excellent books on the subject have been written by some of the above authors.

The history of tuberculin is interesting. It was given out in 1890 by Koch to a small band of workers and was hailed by the world as a cure for tuberculosis. It was found woefully wanting and within a few months was almost universally discarded. Those using it were almost unanimous in saying that its main action was to spread the disease, increase the size of cavities and cause emaciation and weakness. The remedy, if it could be called such as it was then used, was discarded by the great majority of workers until about 1901, when the publications of A. E.

Wright and Sahli, working independently and on different lines, came out. Since this time, its popularity has steadily increased and now, as previously mentioned, it forms an important part of the treatment in most sanatoriums. The admitted mistake of the early workers was the ignoring of reactions, or rather the endeavor to produce reactions. It has been the avoidance and possibly also the occasional utilization of slight reactions which has brought it into popularity again.

It hardly comes in the scope of this paper to mention the many theories connected with the action of tuberculin. Two theoretical factors known as sensitiveness to tuberculin and tolerance to tuberculin are of considerable importance, however, as a working hypothesis, and I should like to discuss them briefly. Normal animals possess neither sensitiveness nor tolerance. Koch injected as much as 1 c.c. of undiluted tuberculin in a normal boy without the production of fever. Guinea-pigs have been inoculated with more than this without the production of serious symptoms. I was interested in studying the effect of tuberculin on platelets a few years ago and in this work injected as much as 3 c.c. of undiluted Old Tuberculin in small young rabbits. One c.c. doses were not followed by visible ill effect. Three c.c. doses caused anemia and emaciation, but the animals lived for several weeks. The story is quite different in humans or animals infected with tubercle bacilli. Here even minute doses are usually followed by a violent febrile reaction known as the tuberculin reaction. The property of the tissues which makes the animal susceptible or sensible to the products of tubercle bacillus is known as sensitiveness. It might well be asked whether this tubercular sensitiveness is beneficial or harmful to the organism. It seems both beneficial and harmful. It is harmful in that it seems largely responsible for fever in an uncomplicated case of tuberculosis. Recent workers on the subject believe that fever in tuberculosis is largely the result of a series of tuberculin reactions caused by repeated autoinoculation with

* Read before the Jackson County Medical Society, Oct. 21, 1913.

tubercle bacilli or their products. Sensitiveness would seem, therefore, largely responsible for the down-hill course of the patients. Many believe, however, that sensitiveness is also of great importance in the protection of the organism. It has been shown, for example, that if tubercular cattle or apes are inoculated with living virulent tubercle bacilli there follows the next day a tuberculin reaction, but the animals live on indefinitely. The story is quite different if normal animals are used. In these no tuberculin reaction follows inoculation and the animals seem unaffected for a period of days. Later, however, they die of miliary tuberculosis. The assumption is that sensitiveness on the part of tubercular animals is harmful in some respects, but is also a relative protection against either experimental inoculation or autoinoculation with living germs. In other words, it helps prevent the spread of the disease. There is also clinical evidence which favors the view just expressed. For example, tuberculosis runs a rapid, fatal course in patients who live in countries such as Chile and Argentine, where the incidence of tuberculosis is low. The same is true of infants the world over. Apparently the slight infections which the vast majority of adults of this climate have, affords a relative immunity against the rapid progressive form of the disease.

The other theoretical factor previously mentioned is tolerance. The injection of even minute doses of tuberculin may cause a severe febrile reaction in tubercular patients. Now, if the initial dose of a long series of injections is extremely small, and if this dose is slowly and gradually increased at proper intervals, the dose may be eventually increased a thousand or even a million times the size of the original dose without the production of fever. The immunity so produced is known as tolerance.

The effect of tuberculin if properly administered is to increase both sensitiveness and tolerance.

The theoretical object of a course of tuberculin is to increase sensitiveness and tolerance to a point which can prevent spread of the disease and also render the patient immune to products of the tubercle bacillus and in this way keep him a febrile. This, if it can be accomplished, would seem to give the optimum opportunity for arrest of the disease.

I have not sufficient time to dwell long on methods of giving tuberculin, but would like to discuss briefly the general principles involved. Two methods are employed at present, each of which has a sphere of usefulness. The one best suited to the treatment of pulmonary disease, and in fact to any case which is likely to be febrile or severe, is that elaborated over a period of years by Goetsch and Sahli and others. The general principles of this method are as follows: The first dose must be so small that it cannot

cause a serious reaction even in the most susceptible individual. It should be increased rather rapidly to a point very short of producing a reaction. It should then be increased more slowly, but as rapidly as the patient is able to tolerate it without giving a reaction. The table below elaborated by Pope at the suggestion of Lawranson Brown is a modification of that used by Denys, Sahli and others, and furnishes a very accurate means of increasing the dosage at a constant rate. For the initial dose, 10 cmm. of a one to one million dilution of tuberculin is given. The dose is increased at first according to the basis marked 4, 5 or 6 — that is, it is increased rather rapidly. When the 100 cmm. dose is reached 10 cmm. of the next lower dilution (that is, one to one hundred thousand) is given. This is increased as was the previous dilution, until the patient gives the faintest sign of a reaction; this may be a little nausea, anorexia, headache, malaise, slight chills, very slight rise of temperature, pain or redness at the sight of inoculation, or in fact almost any change in the condition of the patient which may appear the day following an injection. The next dose is then not increased, or safer still, is reduced, and after this is increased at a slower rate, that is, according to the basis marked 10, 15 or 20. Some patients stand a more rapid rate of increase than others.

2	3	4	5	6	8	10	12	15	20
10	10	10	10	10	10	10	10	10	10
32	22	18	16	15	13	13	12	12	11
100	46	32	25	22	18	16	15	14	12.5
	100	56	40	32	24	20	18	16	14
		100	63	46	32	25	22	18.5	16
			100	68	42	32	26.5	21.5	18
				100	75	40	32	25	20
					100	75	50	38	22
						100	63	46	34
							79	56	40
							100	68	46.5
								83	54
								100	63
									74
									86
									100
									63
									71
									79
									89
									100

Sahli, Trudeau and others recommend that the dose be increased to 1 c.c. of undiluted tuberculin if possible — recognizing, however, that many cases can never tolerate so much. Riviere and Morland and others advise that it be increased to a point which gives sensitiveness enough to prevent spread of the disease and tolerance enough to keep the patient afebrile. In their experience, 10 to 100 cmm. is sufficient. The final dose should be repeated for indefinite period, at least for a few months after the disease is arrested. A fresh flare-up in later years requires a second course of treatment, beginning again with small doses and again working carefully upwards.

The intervals at which the inoculations are given should be about twice a week with small doses, once a week with the larger doses and once in two or three weeks with the final dose. It is dangerous to leave an interval longer than this.

for the patient may lose tolerance and react when the next dose is given.

I can hardly emphasize strongly enough the necessity of avoiding reactions during tuberculin treatment. Sahli says that reactions should be named damage, and that one using tuberculin should realize that it may require months to regain the ground lost during one reaction. He feels so strongly on this subject that he has given up the use of subcutaneous tuberculin test, stating that the information gained rarely justifies the harm done. It was the ignoring of reactions which threw tuberculin in disrepute and placed on it a stigma from which it has not yet recovered.

The second method of giving tuberculin is that elaborated by A. E. Wright by means of the opsonic index. Wright gives medium-size doses (0.005 mg. and larger) at longer intervals. The proper dose for a patient once determined is repeated for an indefinite period. It cannot be increased in size as with the other method. The effect of this treatment is to increase sensitiveness, but not to increase tolerance. For this reason it is of use only in cases where tolerance is not needed—for example, in localized afebrile cases (so-called surgical tuberculosis). It is admittedly inadequate for pulmonary cases. It gives excellent results in children. The method is more difficult to carry out successfully than the frequent interval method.

Only a few words may be said regarding the choice of tuberculin. There are a great number on the market. All are alike in the essentials, but certain groups have their sphere of usefulness. The tuberculins may be classified into three groups. The first represented by Koch's old tuberculin (called T, O. T., or A. T.) consists of the filtrable products of the tubercle bacillus; an albumous free preparation (called A. F.) is a little superior to the old tuberculin in some respects. The second group represented by Koch's new tuberculin (called T. R.) consists of the insoluble residue of the bacilli. The third group represented by Koch's second new tuberculin (called B. E.) and the Tbk recommended highly by Sahli consists of a mixture of the filtrate and the insoluble residue of the bacilli. The soluble preparations are better adapted for the short interval dosage on account of the lesser tendency to cumulative effect. The insoluble preparations on the other hand, are a little superior to the soluble when the long interval method is used. There is only one group of preparations which should be heartily condemned. This is any tuberculin which is sold in drug stores diluted up ready for use. Tuberculin in concentrated form keeps well for six months or a year. Unfortunately, however, it begins to deteriorate when it is diluted. There is a depressionable loss of strength in four or five days, and after ten days it may become completely inert.

The result is that a doctor may be using tuberculin which has remained in a drug store for some time and get the dose up fairly high, then may get some of a fresh supply which is really active; repeat the dose previously used and have an unfortunate result. The German firms refuse to sell diluted tuberculin through agents, and dispense it only to the doctors direct with the understanding that it is for immediate use.

I have left little time for the consideration of results and hope this feature will be taken up in the discussion. The ideal cases for apparent cure are the incipient. I suppose the earliest cases of tuberculosis which can be diagnosed clinically are those of the cornea and sclera. Here the tubercles can be seen at a very early stage. In cases so incipient as this tuberculin often acts almost like antitoxin in diphtheria. Riviere and Morland say the same is occasionally true of glandular tuberculosis if the treatment is started when the glands are small and before there is marked caseation. No such rapid result can be hoped for in the treatment of larger lesions. Tuberculin gives better results in surgical than in medical tuberculosis. Pulmonary tuberculosis is one of the most severe of tubercular lesions, and yields more slowly to treatment than tuberculosis of other organs. In spite of this, however, phthisis offers the largest field of usefulness for tuberculin. Its purpose is two-fold — arrest of disease in the patient and protection of others. Sahli believes it is destined to fill as important a place in the fight against tuberculosis as vaccination does in small-pox. It is to be recommended for trial really in all cases unless the disease seems acute or rapidly progressive. Even in these it can often be given if introduced by a course in hygienic treatment.

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DISCUSSION

DR. W. E. SCHAUFFLER: I humbly apologize for being late for this meeting—too late to hear Dr. Duke's paper, consequently being unable to discuss the paper intelligently. I am sure the scientific aspect of the tuberculin treatment of tuberculosis has been ably covered by Dr. Duke and I should not differ with him on the subject, nor could I add anything to what he has said.

It remains only for me to offer what I may with regard to the practical value of tuberculin treatment, and this I must do more from the experience of others, as it comes to me in the literature of the subject than from personal experience. My own personal experience has been too limited to be of value, covering some twenty cases, all quite well advanced, late second and third stage cases, treated at their homes usually under not very favorable surroundings. They have either left home to go west and have been lost sight of, or they have gone through the usual ups and downs of the disease with which we are all so familiar and have finally died.

At our State Sanatorium at Mt. Vernon with the work of which I have been familiar for the past few years, the tendency has been to use tuberculin chiefly in the early stages—often before tubercle bacilli are

present in the sputum. The results have been good, but not better perhaps than might have been attained by dietetic-hygiene treatment without tuberculin.

What I bring you, therefore, as the result of a careful canvass of the more recent literature on the subject, both English and German, is this:

First, that in Germany especially, where the keeping of vital statistics is much more accurate than in this country or in England, the diminution in the number of deaths from tuberculosis in the past five years has been very marked (variously stated as from 20 to 30 per cent.), and still more marked has been the proportion of those who have been able, after undoubted and quite serious involvement in pulmonary tuberculosis, to return to work and remain at work without apparent harm to themselves.

This fact, taken in connection with the statement that tuberculin treatment is employed to a greater or less extent in 70 per cent. of all tuberculosis hospitals and sanatoria in Germany, and even in a certain number of the out-door clinics is to say the least, very suggestive.

Another interesting fact in this connection is that the life insurance companies, railroad companies and others who are financially interested in the prolonged life and working capacity of those upon their books, quite commonly provide for the continued tuberculin treatment of their tuberculous wards after they have been discharged from sanatoria.

Second, I give you only two or three little groups of statistics of cures or of restoration to working ability with disappearance of bacilli from the sputum.

Bandelier of Wildbad reports on 500 cases treated with tuberculin, 202 of which were open cases (bacilli in the sputum). At the end of five or six months' treatment 129, or 63.9 per cent. of the 202 open cases, showed sputum to be negative.

E. Lowenstein, as long ago as 1910 in the *Deutsche Med. Wochenschrift*, reporting on 682 open cases under tuberculin treatment, reports 361 or 53 per cent. as having lost the bacilli and being returned to various grades of more or less hard work. He says that in twenty years of ordinary sanatorium treatment he had never seen more than 15 per cent. lose their bacilli.

Nor must we suppose that tuberculin treatment with correspondingly good results is confined to Germany. Approximately the same results come to us from portions of England. In this country many of our best known workers in this line have used tuberculin treatment cautiously ever since it was first introduced, even through the years of dread and panic concerning tuberculin which followed its early introduction by Professor Koch. This early experience I well remember when at the German Hospital in this city we shook our patients over the brink of the grave with colossal doses of tuberculin and correspondingly progressive and alarming general reaction. The more thoughtful men and those having the largest opportunities, such as Trudeau, Lawranson Brown, Von Ruck, Pottenger and many others continued the cautious use of tuberculin during all that period.

The testimony of these men and of many others in this country remains favorable and this practice is continued by them, notwithstanding the frequent declarations on the part of many others that tuberculin has been a failure and is practically abandoned. An interesting fact is that in this country as well as elsewhere the chief value of tuberculin treatment is found to be in the second stage and some early third stage cases. At least it is easier to demonstrate the benefit of this treatment here than in those early cases which, under favorable conditions, we have a right to expect to do well any way. It has been objected that tuberculin is not standardized—that you do not know the exact working capacity of any given preparation. Here, as elsewhere in the practice of medicine, we must adapt our remedy to the individual case with careful watch-

ing of results. Who of you can tell what the effect of any given dose of digitalis or of many of the other drugs which you daily use will be on any human individual. You find a standard for your preparation by the effect it has on the patient.

The testimony is unanimous that, handled with care, tuberculin treatment need bring no undue hazard to our patients. I feel that we in this city are losing time and sometimes losing lives by our timidity with regard to the use of tuberculin. Let us take the matter into serious consideration, inform ourselves on the subject to the best of our ability and here as elsewhere rather take some risks of doing harm sometimes than lose the chance of often doing good. It would undoubtedly be of great value to many patients discharged from sanatoria in our own or other states if returning to city life in St. Louis, Kansas City, or elsewhere, they might expect to have a tuberculin treatment from which they have experienced so much good continued at appropriate intervals after they have returned to their work.

The multitude of different preparations of tuberculin which has been introduced by various observers in the hope by their several modifications of avoiding some of the bad effects of tuberculin need be no argument against its use. They have not accomplished very much and yet we have every reason to believe or to hope that the improvement sought will yet be obtained in the future. In the meantime experience still shows that the original tuberculin of Koch with the modifications soon after made by him is the most reliable preparation.

We have not in tuberculin a perfect weapon for our use, but how many other perfect weapons do we carry in our therapeutic armamentarium? Can we refuse the help it may give us because tuberculin does not entirely fulfill our hopes? Let us rather for the present gratefully avail ourselves of all the help it furnishes, looking for more perfect products or different products, in other words for better weapons which the future shall place in our hands.

DR. E. R. SCHORER: Dr. Koch's observation that tubercle bacilli either dead or alive injected into well and tuberculous guinea-pigs produce markedly different reactions, marks the beginning of our more recent ideas on allergy and hypersensibility. Koch observed that injection of living tubercle bacilli into the subcutaneous tissue of guinea-pigs produces no effect until after twelve or fourteen days, when there develops a tubercular nodule at the site of injection and the neighboring lymph glands become involved. If, however, living or dead tubercle bacilli are injected into an already tuberculous guinea-pig there is a reaction at the site of injection within twenty-four hours which is followed by a sloughing off of the tubercular tissue. He furthermore observed that if very small amounts of killed tubercle bacilli are injected into tuberculous guinea-pigs the condition of the animal improves and some of them recover from the disease. Koch found that the injected bacilli are not absorbed and from this he concluded that the curative effect must be due to a soluble part of the tubercle bacilli. On this basis he prepared his tuberculin and with tuberculin obtained the same result he had obtained in his previous experiments. He found that while as much as 20 c.c. of tuberculin usually does not affect well guinea-pigs, 0.5 c.c. will produce death in a tuberculous guinea-pig. At this time tuberculin was announced and many people submitted to treatment by "Koch's Lymph." It soon became evident that the course of the disease was hastened in some individuals, and as a result Koch's tuberculin went into disrepute from which it did not recover until recently. This, however, has not been the only reason why tuberculin has gone into disrepute. It was realized that tuberculin is not a standardized product and that the same amounts of tuberculin are made from large and small amounts of

growths of tubercle bacilli. A few years ago the American Public Health Association tried to standardize tuberculin and to a certain extent at least has defined the product. Another of the factors that has brought the tuberculin into disrepute has been the unscientific method and erroneous method of administering it. There is no routine for all patients, each patient being a particular object for study and the patient himself the best regulator. A tuberculous patient is hypersensitive to tuberculin injections and hypersensitivity is manifested by a local reaction at the site of injection of tuberculin, a focal reaction at the site of the tubercular lesions and a general reaction manifested by fever, loss of weight, headache, etc.

The whole idea of modern tuberculin treatment is to produce no harm. It is undesirable to produce an extensive focal and general reaction and still if the patient is to be benefited a slight focal reaction must be obtained. To do this, slight warning signals in the form of a local reaction must be obtained from time to time, and it is my practice to increase the dose of tuberculin until a slight local reaction appears, in which event I feel that there is also a slight focal reaction.

DR. E. L. STEWART: If in tuberculin we have a therapeutic agent in the treatment of tuberculosis it is quite evident that a vast majority of physicians in Kansas City are not using it. I am personally acquainted with most of them and know whereof I speak that probably not over 5 per cent. use tuberculin as a therapeutic agent. This, however, does not mean that most physicians are not awake to the value of the product, but rather that many of them while realizing its usefulness when properly given also realize that it is a two-edge sword that can cut either way and that unless they make a special study of tuberculin administration and are willing to devote a great amount of time to the study of each patient, they are apt to do many times more harm than good and therefore in not using the product they are wiser than may at first seem. One case in my own practice clearly demonstrated that fact. A young lady about 20 years of age, showing many bacilli in sputum and running a normal temperature and slightly accelerated pulse with small consolidation in left upper lobe, was put on B. E. After several months the advance of consolidation seemed to be arrested, coughing diminished and the tubercle bacilli all but disappeared from sputum. I consented to her going with her mother on a trip to the coast, feeling that the sea breeze might further assist her to recover. No exertion was to be allowed; patient was to remain very quiet; take a stroll of a few blocks each day and eat heartily of staple foods as possible. I also allowed the mother to take along with her the tuberculin, instructing her to "go easy" with it and in the event of unfavorable symptoms to discontinue its use and return home at once. The mother was highly intelligent; had watched me give it a great many times, and I felt I could trust her to administer this product some four or five times for I did not wish the tuberculin treatment to be interrupted. I also examined her sputum which she sent me once each week. All went well for about four weeks when a specimen of sputum arrived showing an enormous increase; a letter also came the same day saying that the patient did not feel as good as heretofore and that they were coming back home as instructed. When she arrived I found her expectorating much more than she had been accustomed to do; pulse accelerated and temperature two degrees above normal which was unusual for her. I did not confine her to bed, but ordered her to keep quiet and immediately withdrew the tuberculin. In one week's time the temperature was normal; patient's pulse and general condition improved; sputum reduced to about one drachm in twenty-four hours and bacilli so scarce that

it required considerable searching to find them. I am sure that the pronounced negative phase manifested was the result of injudicious tuberculin administration though the mother had followed instructions perfectly. The error was my own. I should not have presumed to have known one month ahead what was to be the space between treatments and the size of dose to be given, for this no one can know. I assure you I felt the error keenly and will never make the mistake again.

Dr. Schorer is right when he says that tuberculin should be standardized in unit strength. There is marked variability in the strength of the different tuberculins. If it is of an advantage to standardize diphtheria antitoxin, why not tuberculin? While we are not discussing the diagnosis of tuberculosis, yet since tuberculin is being discussed I am going to say a word for the use of the product in diagnosis of the disease. It is almost universally admitted that a positive Moro or von Pirquet reaction is of little value in diagnosing the disease in adults since both tests are so delicate they give positive reactions when only a tuberculous infection and not an active tuberculosis exists. In adults the only test to be relied upon is the subcutaneous injection of tuberculin, when, in the presence of an active process, systemic manifestations such as a feeling of malaise, slight headache and rise of temperature is noted. In this no harm will result and the reaction can always be depended upon in active tuberculosis—providing the patient is not so far gone that the system has not the strength to respond. Tuberculin should be kept in concentrated form and diluted fresh just before using.

Some lay no importance to the increase or decrease of bacilli in the sputum. I do not agree with them. I feel better when my patient's sputum shows a decrease in bacilli, especially if said decrease appears constant. There are times when a small abscess will rupture and for a single examination the amount of pus and number of bacilli will frighten you, but this condition lasts only a short time; is not associated with marked constitutional changes and need not be confused with a rapid advance of the disease. Under such conditions the sputum should be examined daily to arrive at a proper conclusion; the bacteria count should be made by dissolving a twenty-four-hour sputum in antiformin, bringing the amount up to a fixed volume, thoroughly shaking it and examining say 1/10 e.c. on a glass slide, stained in the usual manner. A count can be as easily made with sputum as with blood.

In conclusion I wish to say that it takes hard work, study and perseverance to treat a tuberculous patient with tuberculin. A very great majority are so poor that they cannot pay the physician anything near what his time and work are worth. This means that a physician who treats this disease with tuberculin must either treat his patients largely by guess and probably do more harm than good, or he must resort to frequent physical, sputum and blood examinations which will use up all his time and he will die poor, a martyr to science.

Dr. Schauffler has told you of our state sanitarium at Mt. Vernon. Dr. English, physician in charge, is content with giving his patients rest, fresh air and good food and leaving tuberculin alone. He is doing good work, but I do not doubt that certain cases there as elsewhere would be benefited by the tuberculin treatment. Should he undertake it and be well under headway a new political administration might remove him right in the midst of his good work and all that had been gained would be lost so he probably is wise in letting tuberculin alone.

DR. FRANK I. RIDGE: While having had some experience in the use of tuberculin, I feel by no means that I am competent to criticize or find fault with some of those who have done far more work along this line.

But agreeing with other equally as good authorities, I believe my own experience justifies me in finding fault with Dr. Duke's opening remarks in that a reaction is undesirable. I think that every man or every physician who conscientiously administers tuberculin to a tuberculous patient desires and should strive to produce some reaction. In making this statement I wish to qualify it in that a reaction produced should at all times be under control of the physician. Especially should a focal reaction be obtained if we desire to benefit the patient. These focal reactions manifest themselves in the larynx and eye by direct observation, but in other tissues, such as glands and lung we are dependent on palpation and auscultation for rales and swelling. This I believe is in accordance with Dr. Schorer's statement.

I also wish or desire to disagree with Dr. Stewart as to the benefits of standardized tuberculin. Tuberculin, according to my conception and others, is not a stock drug to be administered by inexperienced hands or according to any set routine. Patients have their own individual reactions to tuberculin toxins and these alone should be an index as to the dosage.

Another factor which I think tends a great deal to discredit the usage of tuberculin is the fact that the majority expect too much in the way of benefits, especially is this true in those cases of cavity formation where there is always some secondary infection—either streptococcus or pneumococcus. In these cases we should try to treat both infecting agents by the use of tuberculin and autogenous vaccines. Another procedure which I believe would help in a great many of these cavity cases is the production of artificial pneumothorax and thereby giving better opportunity for granulation and fibrosis.

I may be, and those of the school which I follow, considered radical in my ideas of tuberculin therapy, but taking the mean temperature of these patients day in and day out, we find that many intervals of hyperpyrexia are simply concurrent with the course of the disease and are not to be blamed to the tuberculin. I do not believe with others that a temperature of 100.6 is any contraindication to the use of tuberculin even when caused by its actions alone. But this temperature should act as an indicator for a more careful and gradual administration in treatment and not a sign to cause a discontinuance of its use.

In closing I wish to say that all cases of tuberculosis, I believe, can be helped by tuberculin. I wish to thank Dr. Duke for his very instructive paper and hope that it will stimulate a greater use of tuberculin in this vicinity.

DR. D. E. BRODERICK: I wish to speak of tuberculin in children. Dr. Duke's timely exposition of tuberculin therapy is particularly praiseworthy since we are amiss in its application. I expected a more fruitful discussion by the surgeons since tuberculin finds its greatest field in the surgical tuberculosis of children. The object of tuberculin treatment is the sensitization of the tissues and the establishment of a tolerance. And the results of tuberculin treatment is the production of a fibrosis or vice versa, the rarefaction of the inflammatory area with the end result of a better vascular supply. The latter view is held by vaccine therapists. In London it is the rule for all children suffering from surgical tuberculosis to be treated systematically with tuberculin. I start with 0.0001 mg. and avoid a general reaction. I see no great benefit to be derived from standardization and am firmly of the opinion that the result is dependent upon the personal equation of the patient. I do not believe that one system of administration will apply to all cases. Tuberculin therapy is surely a valuable adjunct in the treatment of surgical tuberculosis of children.

DR. J. G. SHELDON: I shall mention one point only; namely determining the dose of tuberculin by cutaneous

reaction. My attention was first called to the so-called 4 mm. reaction in an article by White and Van Norman in 1910. Their method consists of doing a von Pirquet test with 0.01 c.c. of 1 per cent. tuberculin (O.R.) and noting the reaction in from forty-eight to seventy-two hours. Skin reactions are produced until an amount of tuberculin is found which will result in a cutaneous reaction 4 mm. in diameter. This amount is considered the proper dose for the individual.

Those who have given this method a trial speak favorably of it. Kashman believes that it is safe and has improved his results. While the above method is in the experimental stage, I consider it worthy of a trial.

DR. JOS. S. LICHTENBERG: Dr. Duke has spoken of tuberculous eye affections which bring up the subject of tuberculin in ophthalmic practice. There is practically no tissue of the eye free from infection of tuberculosis. The conjunctiva, the sclera, the cornea, the iris, ciliary body, choroid, retina and optic nerve, all are affected.

Diseases of the retina respond but feebly to the tuberculin treatment, but in the other tuberculous affections of the eye tuberculin treatment is most brilliant in its results. Lately the use of tuberculin in phlyctenular disease has awakened great interest. The works of men like Leber, Axenfeld, Eyre, Tivnen, Davis and Vaughan all are in favor of this. On the other hand, observers like Brunz and Colombo lean to the theory that this is a toxemia from auto-intoxication.

There are two methods of use of tuberculin in ophthalmic practice; first, those of small doses according to Wright, as described by Dr. Duke; and the second method as worked out by Von Hippell in which we give such a dose as to get a very slight local focal and general reaction, endeavoring not to elevate the temperature more than one degree above normal. This reaction is allowed to subside and this repeated with increasing doses if necessary until there is no local, focal or general reaction, and the lesion of the eye becomes free from inflammation.

Following the disastrous results of the use of tuberculin by Koch in his earlier trials, it is interesting to note that between 1893 and 1900 there was but one case reported in which tuberculin was used. About that time Von Hippell worked out his method of the use of tuberculin, which brought it again into favor.

Dr. Duke will remember a case which he saw in my dispensary service at the Post-Graduate Hospital, in which the use of tuberculin produced a very rapid cure of kerato-iritis.

To those interested this subject is extremely reviewed in a paper by Davis in New York before the meeting of the A. M. A. at Minneapolis this year. To this article I am indebted for many of the above facts.

CLOSING DISCUSSION BY DR. DUKE: I wish to express my thanks and appreciation to the doctors for their interesting discussions. If I differ with any of you it is in the best of spirit and with the realization that our greatest authorities on the subject who are largely responsible for our points of view are not wholly unanimous on some points. Our greatest variances seem to be regarding reactions and in defense of my own desire to avoid them by all means, would say that Koch and his coworkers threw tuberculin in disrepute by using doses which were too large thereby producing reactions. Wright and his coworkers in reviving the use of tuberculin, at first made the same mistake, and I am afraid that here in Kansas City if its use is revived, this mistake will be made also and the remedy discarded by many.

Sahli has had perhaps the greatest experience with tuberculin and his strenuous objection to overdoses and reactions, supported as it is by so many others should be carefully considered. I think. In my paper I think I said that a slight rise of temperature (about

one degree or a little over) is excusable. A mild reaction of this kind can do little harm, but at the same time should be regarded as of grave significance. If the next dose is made larger and sometimes even if the same dose is repeated a violent reaction may follow. That such is harmful is admitted by everyone, I think.

I can hardly agree even with Dr. Schorer in his favoring the production of slight redness at the site of inoculation. It is true that very often the first evidence of reaction shows at the sight of inoculation, the second at the tubercular focus and finally a general reaction occurs. The danger in an endeavor to produce a focal reaction is that our means of observing a slight focal reaction are too great to be surmounted. If the focus could always be seen as in the case of eye tuberculosis one might endeavor to produce a faint increase in redness, etc., but in the lungs, internal organs and even in glands, a slight focal reaction can rarely be detected. Really, if focal changes are detected the reaction is in the vast majority of cases a severe one and accompanied by a general reaction in a great bulk of cases. It may also be added with emphasis that in a great many patients the difference between the amount of tuberculin required to produce a slight local reaction and that required to produce a general reaction is small indeed and, that any one endeavoring to produce repeatedly a slight local reaction will produce occasionally a general reaction. For this reason I side with the men who say that it is unsafe to ignore even the slightest reaction that when such is produced the dose should be either lowered, repeated or increased with greater care. The above applies especially to the short interval method of treatment. When Wright's long interval method is used faint reactions need not be taken so seriously.

The following of the opsonic index mentioned by Dr. Stewart as used by the coworkers of Wright is hardly practical except in large clinics. The limit of error is so great in determining the opsonic index that the majority feel that it is no more reliable than our clinical guides. This too would take tuberculin out of the hands of the general practitioner and this would of course prevent its ever being widely used.

The four millimeter reaction mentioned by Dr. Sheldon must be considered in the experimental stage and not ready for practical use. Bandelier and Roepke have been interested in this problem for some time and while they are hopeful they have not yet reached any definite conclusions. It is much safer to start with a dose which cannot do harm and work upward than to attempt to estimate an optimum initial dose by uncertain methods and occasionally do injury.

As mentioned by Drs. Schauffler and Ridge the lack of an accurate standardization of tuberculin is no great obstacle to its use. The preparations put out by Hoechst-Farbwerke are standardized well enough for practical purposes. We all realize that the dose of tuberculin must be learned from the patient, not from the manufacturer. We must realize too that even undiluted tuberculin deteriorates some, so that a new preparation may be notably stronger than one which has been used for some time. It is safest to buy tuberculin in a comparatively large quantity and use this over a period of months. When a new preparation is obtained the dose should be reduced to one-half or even one-tenth of the previous one.

There is no reason why the use of tuberculin should not be wide-spread. By this I do not mean it should be administered by those unacquainted with its pitfalls and dangers. There is really, however, no obstacle to prevent any painstaking doctor having a number of cases to treat from reading some of the excellent books on the subject, diluting up his own tuberculin (which is a comparatively easy matter) and giving his patients all that can be gained from this treatment.

BLOOD-PRESSURE *

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The maintenance of a normal circulation is essential to good health. By this is meant not only a normal action of the heart, but also a maintenance of a normal circulatory equilibrium throughout the body. These two conditions, heart action and a normal pressure within the arteries, are in every way dependent on each other. Between the heart—the central source of supply—and the capillary system there is a large ramifying network of blood-vessels of progressively narrowing individual caliber which convey the blood to all parts of the system. In this system of tubes between the heart and the capillaries we find important physiologic functions which are very necessary to a normal state of health. We must remember that normally the arteries are not rigid tubes of fixed caliber through which the heart drives the blood by the force of each ventricular contraction, but that they are elastic, distensible channels, and that they possess the power of contractility after being filled and distended with blood. It is this recoil or contraction of the larger distended arteries on their contents that drives the blood into the capillaries. A rhythmically contracting heart and a volume of blood alone could not afford every part of the body its perfect supply of pabulum nor maintain an equal or normal distribution of this fluid. We must necessarily have another very important mechanical factor to complete our system. This is blood-pressure. By blood-pressure is meant the pressure exerted by the blood on the walls of the arteries in which it is flowing. In a system where the pump is large enough, the tubes short enough and the outlet large enough, there would still be little or no pressure in the tubes; but in the circulation of the blood where there is a force behind, as the heart, and a resistance in front to the outlet, which is caused by the small caliber of the terminal arterioles and capillaries, a pressure is produced in the larger elastic, distensible arterial tubes which must be maintained to a normal degree for perfect circulation. In abnormal conditions clinicians have always recognized the hard incompressible pulse, and often observed the whipcord conditions associated with structural changes in the arteries, but until comparatively recent times they were without the proper means of noting with accuracy its relation to increased blood-pressure. Years ago it was found that the tactile estimation of blood-pressure by feeling the radial artery was such a notoriously uncertain method that the pioneers in the field of cardiovascular disease soon appreciated the necessity

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and great advantage of a special instrument for measuring more accurately the arterial tension. The various makes of instruments on the market for this purpose are called sphygmomanometers. The scale on these instruments usually reads from 0 to 260 or 300 mm. The figures on the instrument mean that the blood-pressure of a patient is sufficient to raise a column of mercury in a tube of definite caliber to the height of so many millimeters. For instance, if the blood-pressure in the artery to which the instrument is applied is sufficient to raise the column of mercury in the tube 130 millimeters, we then say the blood-pressure of the patient is 130 millimeters. Normally blood-pressure varies somewhat, according to the age of the patient. In 1,000 cases examined by one physician the average blood-pressure for all ages was 127.5 mm. Hg for males and for females at all ages 120 millimeters. In 7,000 cases Cowing obtained the following average normals: Children from 10 to 17 years of age, 85 to 110 millimeters; adults from 21 to 40 years of age, 120 to 130 millimeters; adults from 40 to 50 years of age, 130 to 135 millimeters; adults from 50 to 60 years of age, 135 to 145 millimeters.

It is well to remember that there is an ever-increasing hardening of the arteries as one grows older, and a person of 65 years or over can very easily have a blood-pressure of 160 mm. Hg and still be a comparatively healthy individual. In a patient between 50 and 60 years of age a blood-pressure of 145 mm. Hg would not be abnormally high, while a man under 30 years of age giving such a blood-pressure would certainly present a case for further investigation and study. The blood-pressure of females is from 8 to 10 millimeters lower than that of males.

In abnormal conditions the blood-pressure may be either too low or too high, hypotension or hypertension. In shock, collapse, hemorrhage, cardiac asthma, paresis, many of the infectious diseases, and some forms of organic heart disease the blood-pressure is below normal. One of the earliest signs of tuberculosis may be a low blood-pressure. Cook says that when low blood-pressures are persistently found in individuals or families, we should be on our guard for tuberculosis. The lowest blood-pressure in adults, compatible with life, has been reported by Neu to be from 40 to 45 millimeters, and this occurred with subnormal temperature and accompanied with unconsciousness. This physician has observed and recorded recovery after a temporary fall as low as 50 millimeters.

Some of the most common diseases in which abnormally high blood-pressure is found are arteriosclerosis, chronic nephritis, uremia, some forms of syphilis, cirrhosis of the liver and other conditions. Peripheral resistance in the circulatory channels due to the contraction of the arterioles before the development of arteriosclero-

sis will raise the blood-pressure. Increased heart force induced by the demands of the system from exercise, emotional causes or the ingestion of stimulants or other drugs will raise arterial tension.

Increased arterial tension is a subtle condition often lurking where least expected. It is said that hypertension always denotes the beginning of a pathologic change, which, according to Huchard, Russell and others, is the danger signal, a warning that some alteration must occur in the daily life of the individual presenting the condition, or else the then curable condition will progress and eventually merge into and become a case of cardiovascular disease. A permanent increase in blood-pressure in a young adult or in one in early middle life, in the absence of discoverable organic change in the heart, blood-vessels or kidneys is a sign of chronic toxemia, a poisoning arising from some error in metabolism, or a deficiency of elimination, either intestinal or both. A noted physician says: "I voice the view of many authors when I state that a man past 40, who is under considerable strain or carrying a heavy load in his business or profession and who finds difficulty at times in concentrating his attention, awakens in the morning more tired than when he went to bed, has occasional spells of dizziness or notices occasional tingling or numbness in the extremities, owes it to himself to ascertain whether or not these symptoms are pointing toward the development of arteriosclerosis and are caused by the premonitory warning of high blood-pressure." If high blood-pressure is found in such a case a timely discovery will frequently prevent more serious untoward effects by the advice of the physician. The blood-pressure does not need be greatly increased in order to injure the heart or to cause permanent changes in the blood-vessels and in the kidneys. The amount of work required of the heart to overcome the pressure of the resistance of a few millimeters of mercury mounts up surprisingly when we stop to think that this resistance must be overcome by the heart more than 100,000 every twenty-four hours. This constant amount of extra work, and frequently much more, in many of our undiscovered cases, every day for a few years will surely tell on the heart and arteries, and sooner or later will terminate in permanent pathologic changes in these vital structures. It is really a wonder to us that more serious organic changes do not follow earlier than they do in many of these cases under the increased stress of constant high blood-pressure.

Fischer has recently furnished an interesting report of 550 cases of hypertension in which the clinical and pathologic evidence of nephritis has been carefully considered. Sixty-two of these patients gave definite clinical evidence of nephritis; 15 per cent. were suspicious and 23 per cent. had a normal urine. Excluding those cases with

pressures below 160 mm., in only 3.6 per cent. was the urine normal. Necropsies were held in forty-two cases, and in each instance definite microscopic evidence of nephritis was suspected, although in fourteen of these cases the urine did not show evidence of renal trouble. This furnishes very good evidence that nephritis cannot be excluded when the urine is apparently normal. In Krehl's clinic 87.4 per cent. of the cases with blood-pressure of 200 mm. or higher showed definite clinical evidence of nephritis, and forty-two of the forty-three cases coming to necropsy showed definite renal involvement. Accompanying chronic cases of these kidney and high blood-pressure cases is cardiac hypertrophy, which is probably always secondary to the hypertension. This, in a general way, is only a short outline of this important subject. In order to understand more thoroughly this comparatively new and important method of diagnosis, each physician must work it out largely for himself. The details of this clinical method of diagnosis require close study and frequent application of the method in practical work to benefit fully by its many advantages.

We must understand what is meant by systolic, diastolic and pulse-pressure, and also know how to obtain them. We must understand that the normal potential energy or pressure exerted by the vessel walls is the diastolic pressure. It represents the pressure in the large arteries during the diastole of the heart when the ventricles are being filled. When the ventricles contract and the blood is forced into the large blood-vessels by the force of the heart, this force or pressure is called the active or systolic blood-pressure. We can thus readily see that there must be a difference between the potential diastolic blood-pressure and the active systolic blood-pressure. This difference of pressure is called pulse-pressure. It is that part of the heart's energy which produces the distention of the arteries that is recognized as the pulse. Pulse-pressure is, therefore, the dynamic or active pressure produced by the heart over or above the potential or latent diastolic pressure in the arterial system. To obtain pulse-pressure we therefore simply subtract the diastolic pressure from the systolic pressure as shown by the sphygmomanometer. Normally the pulse-pressure is about 50 per cent. of the diastolic pressure. For clinical purposes pulse-pressure represents the load of the heart. Normally the load of the heart is therefore 50 per cent. of the diastolic pressure; that is, it requires this extra amount of heart energy above the diastolic pressure to keep up the circulation. Pulse-pressure is one of the pressures the clinician should seek to know in the examination of his case. It is important to ascertain the diastolic pressure also, for diastolic pressure represents the resistance to the flow of blood in the peripheral circulation.

In the study of blood-pressure these three important points should be remembered: (1) systolic pressure represents or measures the myocardial value or strength of the heart; (2) pulse-pressure represents the load of the heart; (3) diastolic pressure represents the capillary resistance or the resistance in the peripheral circulation. When we enter this field of the study of blood-pressure it may seem somewhat difficult and complicated, but herein lies the most practical part of the diagnostic work of the student of cardiovascular disease.

We have all found in practical experience that many persons with high blood-pressures and many hearts with impaired valves are not seriously embarrassed for many years, owing to the compensatory hypertrophy and increased capacity for work by the heart which fortunately follows. It has also been found that high systolic pressure, with slightly increased diastolic pressure and a corresponding increase in pulse-pressure, is a compensatory attempt on the part of the heart to adjust itself to new conditions. We must remember that under certain pathologic conditions high blood-pressure may be a necessity—a conservative effort of Nature to meet the indications or conditions required as best she can. We can all readily see that it will take more pressure to force blood through a system of tubes of small caliber, as in arteriosclerotic conditions of blood-vessels, than it will in normal arterial tubes with normal caliber. In fact, as long as the small tubes remain contracted or their caliber reduced from any cause, high pressure from behind is the only means which can force blood through them and keep up the circulation of the parts beyond. However, in this paper we will not have time to explain further details in the pathology of abnormal blood-pressure or of the practical application of this comparatively new method of diagnosis. We wish to state, however, that the diagnostic secret of the study of blood-pressure with a view to therapy lies beyond simply ascertaining the systolic blood-pressure of our patient. Measures for the reduction of high blood-pressure which are given us are proper diet, regulation of the habits of the patients, baths, properly administered, eliminative treatment, internal medicines, such as nitrites and nitrates, and other remedies. The writer also wishes to add that he has recently learned that a very effective means of reducing blood-pressure is by the so-called autocondensation method of the high-frequency current of electricity. Recently he observed patients with high blood-pressure of 170 mm. or more treated by this method in which the pressure was reduced 15 to 20 mm. by ten to twelve minutes' treatment on the autocondensation couch. It is held that this method of reducing high blood-pressure is accomplished without any heart depression, and in practically all cases the fall is more permanent and the method does more to restore normal

metabolic processes of the system than any other agent thus far known.

Among the blood-pressure elevators or measures to raise arterial pressure we may mention adrenalin, pituitary extract, digitalis, caffeine, strychnin, oxygen, saline infusions, etc.

In view of the importance of this subject, and in view of the fact that serious organic changes of the heart, arteries and kidneys can be largely prevented by a timely discovery of abnormal arterial tension, and that the physician, by a thorough knowledge of the methods of obtaining the various arterial pressures, with a knowledge of their significance, is enabled to treat his patients of cardiorenal or cardiovascular disease far more intelligently and scientifically, we feel that it behooves every practicing physician to equip himself with a reliable instrument for measuring the arterial or blood-pressure of his patients and familiarizing himself with the clinical facts necessary in each particular case that will enable him to render to his patients the most effective and scientific treatment possible, which cannot be done otherwise in many of the incipient and advanced cases of cardiac, renal and vascular diseases that almost daily come under his supervision.

OPERATIVE PROCEDURE IN THE TREATMENT OF UTERINE DISPLACEMENT *

JOHN McH. DEAN, M.D.
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In dealing with the subject of uterine displacements it will not be amiss to outline briefly the normal position and anatomic relations of the uterus.

The uterus is a hollow muscular organ situated in the pelvis between the rectum and the bladder. Normally it measures 3 inches in length, 2 inches in width and 1 inch in thickness. On account of its relation to the bladder and rectum it assumes slightly altered positions according to the distention of either of these organs. A full bladder displaces it somewhat backward, while a distended rectum may push it forward.

The fundus, being freely movable, is more subject to these variations in position than the cervix, which is more or less fixed by the sacro-rectal and sacro-uterine bands. The upper limit of the fundus corresponds to a line drawn between the upper border of the symphysis and the space between the first and second sacral segments. The uterus is slightly to the right of this line; the cervix at a point opposite the sacrococcygeal joint.

The ligaments of the uterus play such an important rôle in uterine displacements that it will

be necessary to briefly outline them. The round ligaments composed of unstriated muscular bands pass from the anterior cornua of the uterus, anterior to the tubes, in the anterior fold of the broad ligament, to the side of the pelvis. They pass through the inguinal canal, become tendinous in character and are fused by numerous strands into the labia majora. The broad ligaments formed by folds of the peritoneum occupy the lateral aspect of the uterus. The upper portions, made up of three, leave (1) anterior containing the round ligaments; (2) middle containing the fallopian tubes, and (3) posterior, also known as the ovarian ligaments, containing the ovary.

Folds of peritoneum containing smooth muscle fibers pass from the back of the uterus and encircle the rectum, becoming attached to the sides of the sacral vertebra: these are known as the uterosacral and sacro-uterine ligaments, and serve to fix the cervix.

Recently these ligaments have received much attention in uterine displacements. A fold of peritoneum passes from the uterus to cover the fundus of the bladder and is known as the vesico-uterine fold. This fold, being made up of peritoneum and cellular tissue, plays a very minor rôle in holding the uterus in position. The uterus is normally at right angles with the vagina and is therefore somewhat antverted.

Antiflexion or bending of the uterus forward on itself is distinctly a congenital condition. This position when exaggerated often causes obstruction of the uterine canal near its inner os, bringing with it the many symptoms of dysmenorrhea. Usually the painful menstruation from this cause precedes the flow, and is of cramp-like order, radiating into the inguinal canals along the course of the round ligaments. Sterility is usually a sequel of this disorder as well.

Dilatation of the canal and insertion of the Wylie stem pessary for a week is often followed by relief. Should this fail, the Dudley operation, which consists in splitting the cervix posteriorly and removing a wedge-shaped piece and suturing in such a manner as to widen the canal, gives notable relief, and in fact results in a cure in a great percentage of cases.

The subject of retroversion has received widespread consideration, and for the relief of same many varieties of operative procedures have been suggested. Briefly, ventrifixation was the first suggested by Kelly. The experience of later years has made the indications for this method very limited. When double salpingo-oophorectomy has been performed, ventrifixation may be performed as an adjunct. The formation of two artificial ligaments with a space 2 to 3 inches between them, forms a very vulnerable point for a loop of intestine to become obstructed. The possibility of pregnancy and the unyielding nature of these bands, makes it a procedure not to be considered in the child-bearing period. I

* Read before the Missouri State Medical Association, May, 1913.

may add that the pain and dragging distress complained of by the patient after this operation is anything but pleasant, either for the patient or the surgeon.

The operation of Mills in which the round ligament is sutured in an overlapping manner to the anterior surface of the fundus uteri, can be applied to a certain number of very movable uteri. The objection may be advanced that Mills uses the weakest portion of the ligament, the distal end, to support the uterus. A ridge or shelf is formed that may be followed by painful adhesions. The objection raised against the Mills operation which may be advanced against the Baldy is that the weaker part of the round ligament is used for support. The terminal end of the round ligament being made up of connective tissue, and not so yielding, may be offered as an argument in favor of this method. Making an opening in the broad ligament may not only lead to some troublesome hemorrhage, but may be large enough for a knuckle of gut to become obstructed. Pulling the round ligaments under the tubes may cause some tubal obstruction. Still I can conceive many suitable cases for the adoption of this mode of procedure.

The Gilliam operation which embraces some delicate technic is admirably suited to a vast majority of cases of retroversion. Much like the other methods it is often followed by pains in the inguinal regions, which fortunately are transient. It is suited to all ages. I have performed this method in at least seventy-five cases, have had no fatalities, no obstruction of the bowels—which are offered as objections by its opponents—and have had five partial failures. These five failures were cases with frail ligaments and were not, therefore, suitable for this method. A number of my cases have suffered pain for one or two months; fully a dozen have conceived and have had perfectly normal births. Some I have examined five years afterward and the uterus was in good position.

One of the objections offered against this method—that it necessitates the making of a new opening in the abdominal parietes which may be followed subsequently by hernias—is well founded, for in my series of cases I was compelled once to close a hernia which occurred at the site of puncture. Faulty technic is responsible for this mishap in that the opening is made too large.

A patient operated according to this method in another city was reoperated on by a colleague of mine, who found that the tubes had been used for suspension and not the ligaments at the first operation. This is a technical error that should be guarded against. Intestinal obstruction, it seems to me, may occur, but fortunately it has not done so in my series of cases, and according to Gilliam no authentic case is reported. Faulty technic, namely, allowing too small a space be-

tween the uterine and abdominal parietes, or leaving too large a loop, may result in intestinal obstruction. The Alexander-Adams operation in case devoid of adhesions, and with no symptoms that warrant opening the abdomen, is certainly a good logical procedure.

Retroversion *per se* may require no remedy, and unless symptoms directly attributed to this malposition are present, no operation should be done. It is a strange coincidence that many women with marked retroversion present no symptoms, while some, with but a slight degree, present many.

The neurasthenic with retroversion cannot always be relieved of her backache or pains in the groin by fixing the uterus. Very often the nervous system is the prime factor in this train of symptoms, and the uterus, like the movable kidney, which occurs in about 20 per cent. of neurasthenics, is blamed unjustly.

A mode of procedure that I adopt in some cases of retroversion is to insert a pessary, restore, if possible, the uterus to a better position, and allow my patient to wear the pessary for a few weeks. If the train of symptoms is relieved or much improved, I remove the pessary for a week to see if the symptoms recur. If they do, I feel justified in operating. Under some conditions when the pessary affords relief, especially in the child-bearing period, I adopt no other treatment. A number of patients have become pregnant, and with proper attention during the puerperium have been relieved.

Retroversion allowed to remain with a relaxed or torn perineum will lead to prolapse. In fact, the first stage of uterine prolapse is generally retroversion. This position of the uterus makes it easy to descend.

Prolapse of the uterus like retroversion is due to relaxation of its ligaments, either caused by strain, subinvolution, tumors of the uterus, increased intra-abdominal pressure and destruction of the perineal support. Faulty management of the puerperium is responsible for a vast majority of these cases.

Cystocele and rectocele, end-results of vaginouterine prolapse, must necessarily be considered in the hernia class, and, therefore, need be treated as such.

Intra-abdominal pressure meeting no resistance, owing to a defective perineum, contributes largely to the production of this condition.

In the treatment of prolapse we must consider the age of our patient, also whether she be in the child-bearing age or past the menopause.

In the former age the uterus should be supported by one of the foregoing operations for retroversion and the perineum repaired with possibly anterior and posterior colpoperineorrhaphy. Past the menopause, unless the uterus is very atrophic or subject of some disease, it is best not to remove same.

The Watkins-Werthen operation I have performed sixteen times, and in every case with much satisfaction. It is, of course, only suitable in cases past the child-bearing period. In one case two months after the operation the patient contracted pneumonia and died. I was allowed a post-mortem. The result was all that could be expected and I have the specimen in the pathological laboratory of St. Mary's Infirmary.

It has always been a question in my mind how to treat the cervix in this method. In some patients the cervix was almost twice the length of the fundus, and four presented marked ulceration from rubbing against the thighs in walking. In this class of cases I have either excised the ulcers or amputated the cervix.

Prolapse in tumors of the uterus are best treated by abdominal section, and transplanting the cervix stump or uterus between the recti muscles, as advised by Kocher.

Prolapse necessitating vaginal hysterectomy should be treated by the vagina-pelvic fixation operation, practiced for many years by the Mayos with good satisfactory results.

Prolapse of the vaginal walls, following vaginal hysterectomy, should be treated by vaginotomy or removal of the vagina and suturing the canal walls together.

DISCUSSION

DR. L. C. HALL, Kansas City: I want to commend, in the main, this very excellent paper. It is certainly orthodox in many of its contentions. I wish to refer to what I believe is an obvious truth, that the ante-flexion that we meet with in young girls is congenital. I am quite sure that it occurs too often to be the result of injury, and it sometimes produces stenosis and painful menstruation and is a source of much trouble. I want to disagree with the suggestion of the Ferguson method of splitting the posterior lip of the uterus to correct ante-flexion. It is entirely unnecessary. I believe that by simply dilating the cervix, not once, but often, without an anesthetic, under strict antiseptic precautions and repeating this dilatation it will give entire relief from dysmenorrhea and make it possible for a young woman to marry and become pregnant. I believe the less you cut about the cervix in these cases the better.

In regard to retrodisplacement of the uterus, I have had no experience with the Wertheim operation. That came before the profession eighteen or twenty years ago, suggested by Deefurgen and Machelradeo, specimens of which were shown here. It never appealed to my judgment. It is not anatomical. It disorganizes and disarranges relations, and I believe it is unnecessary, an operation I have never thought I was justified in doing.

In regard to the operation for the support of the uterus by shortening the round ligaments, the doctor has mentioned a number of methods and, to my mind, left out the best of all. That is what is known by the profession generally as the Montgomery operation. He described the Gilliam operation, somewhat like the Montgomery operation. Now the Gilliam operation (as I understand it, and I have heard Gilliam talk of it, and I have heard Montgomery discuss his, and I have heard all these before the section of the A. M. A.), the operation, as I understand it, of Gilliam, is very much like that of Ferguson, which is a stab operation—goes right through, picks up the round

ligament, brings it out through the parietes and the fascia—but he leaves three distinct openings between the anterior abdominal parietal wall and the top of the broad ligament and the uterus.

Now the Montgomery operation obviates that entirely. Very frequently I have done it with entire satisfaction, without any return of trouble and with the relief of my patient. After opening the abdomen, a pair of forceps is placed, as the doctor says, upon the round ligament to steady it and a ligature is carried under the round ligament, about twelve inches of strong catgut ligature or silk taken into and along up under the peritoneum following the anterior route of the round ligament from within out and bringing it out at the proper place through the muscles and fascia on the abdominal wall an equal distance from the central incision. That is Montgomery's. I have modified the procedure by going from without, in through the fascia just where I want. I use a large ligature carrying the needle with fixed handle and I plunge the point down and bring it out on the peritoneum to see it does not emerge from the peritoneum too soon and when I get at the proper place, the entrance of the round ligament up under the parietal peritoneum, I bring it out into the cavity and thread this double ligature, through the eye of the needle and by drawing it I bring the ligament out doubled on the outside of the fascia where it is fastened. One important point is to have your opening in the fascia large enough. For that purpose I spread it with a pair of forceps. I am never afraid of hernia following the operation.

Now in these operations which Dr. Dean has so accurately described, the point is that we use the strongest part of the ligament to support the uterus. We practically put out of use the weaker part of the ligament which has proved itself unable to support the uterus. With this operation of Montgomery there is no possible chance for entanglement of the bowel in front of the uterus, *only one opening* is left, no disarrangement of the anatomical relations, no bundling up of the uterus. We do not punch a hole through the broad ligament and run the risk, as the doctor says, of opening blood-vessels. You are simply taking up the slack of the round ligament, doubling it up, retaining everything in its anatomical relations just as Nature intended it should be, only that you are putting out of commission, so far as support is concerned, that part of the ligament which is doubled up and fastened on the fascia. I don't think there is any question among those who have tried these different methods as to the superiority of the Montgomery operation.

The author of the paper is, I think, quite young. He is progressing along good lines and as he keeps on, if he drops that miserable Wirtheim operation of fastening the womb down in front of the bladder, he is going to do well.

DR. GEORGE GELLHORN, St. Louis: What I liked best in Dr. Dean's paper was that he does not consider operative treatment necessary in every single case of retroflexion that falls into his hands. Such restraint is highly commendable and his example should be followed by all those who perform gynecologic operations. On the other hand, when he does operate, Dr. Dean has, in my opinion, too few methods at his disposal. Practically two methods suffice him to deal with the vast field of retroflexion and prolapse of the uterus. There are, however, so many variations and complications in the conditions mentioned, all of which demand individual consideration, I contend, therefore, that in order to do justice to the patient in a given case, two methods are not sufficient. If, for instance, I follow the routine of performing the Gilliam operation for every ordinary retroflexion, or the Schauta-Wertheim-Watkins operation for every prolapse, I make my patient fit the method instead of making the method

fit the patient. There is no dearth of available methods. Only about four months ago there appeared a paper in a foreign journal showing that up to that time there existed one hundred and thirty-seven methods devised for the operative treatment of retroflexion of the uterus. There may be more by now. Many of them, I dare say, are not worth trying. Others differ from one another only in the smallest details, but there are still numerous other methods left which Dr. Dean has not mentioned and the acquaintance with which would be very helpful to select out of the multitude just the one method which is best suited for our case. It seems to me that the patient has a right to expect that much from her surgeon.

DR. T. J. BEATTIE, Kansas City: This subject, to me, is the most important subject in the whole range of gynecology, and I want to say that the underlying principle of displacements (eliminating the usually congenital antelexion of the uterus), are usually due to a condition that might have been corrected if the obstetrician had been instructed and had carried out the right procedures in the treatment immediately after childbirth. Nearly all of these displacements occur in women who have borne children, eliminating the antelexion. I want to say that I don't believe there is one obstetrician in twenty (I mean taking the physicians promiscuously), who do obstetrical work as they should, who know how to repair a perineum that has been lacerated, immediately. Some of them say that if they simply bring the parts together, the vaginal structures as torn, they will get all the support necessary. I have demonstrated again and again that that is untrue. Then they say if you bring the structures together through the vagina, simply bring the parts in apposition, that is enough. If you go deep enough and locate the muscular structure, the muscle does not give us any support. It is the fascia you have got to bring together, and if you don't bring it together you will as surely sew the seeds for future displacement. It is unsurgical, and I believe the practice of obstetrics should be embodied in our surgical work. I think the surgery of the perineum should be known more by the obstetrician and the general practitioner. I think the thing we should have in our minds in discussing prolapse is that our practitioners should learn from those who have had experience in this work; that we must go back to the obstetrician and teach him, if possible, the care of the perineum.

In reference to the operation mentioned for antelexion, I have done it a number of times. I have to disagree with Dr. Hall. I believe it a good operation, and I know I have relieved my dysmenorrheal patients very often, but it requires skill and study before you can do it correctly. You simply put your patient where she will menstruate without pain. They will never conceive in that condition, because you have a bending of the organ upon itself, and if you don't do something to straighten out that canal that patient will probably go through life a sterile woman with painful menstruation.

In regard to operation for displacement, the doctor made a point that I thought very timely and that is that a woman will go through life with a displacement that does not produce symptoms, and in that case I think it should be left alone. But they, so often, have either a nervous condition or pain in the region of the pelvis, and they seek the advice of a gynecologist or some one who understands these things and we have to advise our patient. All of these operations have their good points. I believe that it depends upon the experiences that one has had in certain lines whether he becomes attached to one form of operation or another. When Dr. Montgomery suggested his operation, it appealed to me as the ideal one for a number of years, and I did it, but I found that the Gilliam operation was as satisfactory to my mind, and I drifted into the habit of the Gilliam operation, just because, as my assistant has said, "You do this without think-

ing," and I guess that is true. I could not see where Montgomery's principles and ideas were any better than Gilliam's. I heard Baldy describe his operation several years ago at the A. M. A. meetings, and I want to say incidentally that I have seen some of my patients have recurrences after the Gilliam operation.

When I heard Baldy discuss this operation of suturing the round ligaments in front of the uterus, which I think was the operation of Webster (possibly the operation of Mills is a slight modification of that), I thought I would try Baldy's and I want to say I have been doing that one for a number of years and I don't think there is a real good reason why it should cause much pressure on the Fallopian tubes, if he understands what he is doing, and I think there is very little reason why he should have an opening large enough in the broad ligament underneath the Fallopian tubes to allow the bowel to come through; so I am doing the Baldy operation. It did occur to me when I was doing the Gilliam operation that I might make too large an opening, and I thought sometimes the opening in the fascia was too large and I would put a catgut suture in and bring it together, and I have never seen any bad results from any part of the procedure of any of these operations, except I have seen a few of my cases who would have a return of their condition.

I want to say (while my time is limited) when these operations were being discussed several years ago, I knew of a case in my city where a ventrosuspension had been performed and where I had occasion to attend the woman in confinement afterwards, and I found the fundus had become attached to the abdominal wall, the uterus almost upside down, the fundus was down and the cervix up. That has impressed me with one fact. When you are doing any operation on the uterus, the Gilliam, Baldy, or any other, remember one thing. Don't take hold of the uterus with a tenaculum. If you do you will likely have adhesions of that fundus to the abdominal wall and you will really do what you do not want to do, produce a ventrofixation.

Just a few words more. I believe that a most important investigation is going on among these gentlemen. Dr. Hall refers to the young men. I think that we young men are doing a great many things in gynecology that the older men had an opportunity to do, but they didn't, and we are trying to improve upon their past work. Another thing. In the last two years I have seen four cases that were operated upon for complete prolapse, with absolute prolapse, and one of my objects in coming here was to hear the subject of prolapse operations discussed. I am going away with just as little knowledge on the subject as I came with. The future work for these gentlemen is to institute some operative work that will cure complete prolapse, not only in women past the menopause, but in those in the childbearing period, and I want to say that the operations so far have been very, very discouraging.

DR. DEAN, closing: I don't think much of the position of the patient after operation. I think they can roll about or be in any position. If you want the fundus to adhere to the abdominal parietes, of course, it is good. I never use the pessary after operation, because if you fix the uterus properly you don't need it. I seldom do the Dudley operation on unmarried women. As for anatomical relations being disturbed, they were not anatomical at the beginning, and secondly, in my experience, no operation I have performed, except in acute conditions, has given me so much satisfaction and so much relief to my patients as the Watkins-Wertheim operation. I am not partial to two methods. I would not perform the Gilliam operation in frail round ligaments, nor the Watkins when suspicious of malignancy. As for one hundred and thirty-seven, or fifty-seven varieties of operation for retroversion, I would like to ask Dr. Gellhorn what determines his choice in that matter. I have felt that if

I knew one operation for retroversion well, it was better than to experiment on one hundred and thirty-seven varieties.

Dr. Reder alludes to constipation in causation of retroversion. In that, of course, I do not agree with the doctor. In fact, cases of retroversion who suffer pain feel more comfortable when constipated. Dr. Reder made a good objection to the Baldy operation. If you attach the round ligament posteriorly too far down, you will have your fundus uteri strung in a hammock.

Dr. Hinchey speaks of how to repair lacerated perineum. I did not want to say anything about the perineum, because I thought I would start more talk, but I would like to emphasize that I did bring out the anatomical fact that the levator ani does not normally pass between the rectum and vagina. We bring the bulbo-ravenuous muscle and the levator ani close to the median line. The central tendon of the perineum constitutes one of the important points in the repair of the perineum. With regard to Dr. Hinchey's remarks as to the cervical stump, "Why don't you bring it up the abdominal wall?" He does not believe in vaginectomy, but I think it is indicated where the entire uterus has been removed.

Dr. Kiefer's points are well taken, but his idea in regard to retroversion I think I mentioned—that the uterus is too large and heavy to be supported by the ligaments; and I want to go farther and say retroversion is not always caused by subinvolution, but often causes subinvolution. As a result of disturbance of normal circulation of the uterus (the uterus lying posteriorly), it becomes congested. There is passive congestion in the endometrium and as a result of that you have hypertrophy of the endometrium. You have a hypertrophic endometritis taking place. Curette that patient with retroversion who has this hypertrophic endometritis, restore uterus to normal position, keep her a little longer in bed than is ordinarily done after operations and subsequently use sitz baths, ergot, etc., and I believe you will accomplish much good for your patient.

LUKE, THE GREEK PHYSICIAN

PART II

A STUDY OF THE EFFECT OF CONTACT BETWEEN GREEK SCIENCE AND CHRISTIAN FAITH IN A HUMAN MIND *

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In the course of a paper¹ read by me before this club in March, 1908, an attempt was made to weigh and estimate some of the intellectual endowments and mental qualities which are credited to Luke the Physician by critics and commentators, or which are obvious in his work, it being expressly stated therein that the claim of inspired utterance made for his writings would be disallowed—and for present purposes the same rule will apply.

In following out the present intention acknowledgment must be made to an essay² com-

ing from a clerical source in which the phenomena of mind manifested by Luke are considered and searchingly discussed; and it may be said with truth, probably, that in no other historic personage was a more interesting field presented for the impact and counter-play of the forces known as natural science and religious faith than in that of the highly trained and accomplished Greek physician under consideration, who, it appears, was the first of his kind in this form of experience in the era in which we are now living.

It may be said as a foreword in entering on this study—a task which may well attract the best philosophical minds among living men—that a consciousness is felt by the writer of his lack of entire fitness to carry out this inquiry in the many directions which beckon to the student of mental science in all its natural unfoldings and actions; and, if it seems that an attempt is being made to set hard and fast metes and bounds to different phases and faculties of mind it should be understood as of merely tentative design, and intended only to bring out into clearer view those distinctions which a careful discrimination may perhaps enjoin. As all of these faculties have their source in the same cerebral soil naturally they cannot be alien to each other, nor be strictly set apart one from the other in considering their normal influence on the words and actions of the individual man.

The scene, then, which comes into view for study was afforded by one of a race of men who, in their time and as a people, were without a peer in mental capacity and grasp, and in the degree of intellectual depth, breadth and culture attained by them in the course of their national life.

The mind of Luke, therefore, may be taken as an example of the best that Greece could offer; and, presumably, it must have been brought under classical training and discipline during its early and susceptible years. This educational phase was followed by the severely scientific courses in medicine taught in the schools of Hippocrates, and thus an arena was formed where, later, two principles were destined to confront each other—one, that of science directed by reason and intellect—the other, pious faith ministered to by emotion and imagination.

In the essay before mentioned Naylor sketches the beginnings of Greek medicine, and alludes to the facilities for instruction in that branch of knowledge down to the age of Luke (p. 34). as follows:

"Genuine medical science in Greek lands began long before the age of Pericles in the temples around the Aegean, where patients were treated by the Aesclepiadae, devotees of Asclepius, the god of healing, who seem to have been a branch of an original priesthood, differentiated from it by a separate function. . . . Hereditary transmission of office and the habit of inscribing records of cures on votive tablets helped on the accumulation of empirical knowledge until in the fifth century B. C. a fairly large body of such knowledge was

* Read before the St. Louis Medical History Club, 1909.

1. Luke the Physician (Harnack), with Remarks on the Literary, Dramatic and Medical Quality of the third Gospel and the Acts. By George Homan, M.D., St. Louis. The *Æsculapian*, December, 1908, Vol. i, No. 1. Brooklyn, N. Y. MCMIX.

2. Luke the Physician and Ancient Medicine. By the Rev. John Naylor, Manchester, England. The *Hibbert Journal*, October, 1909, viii, No. 1.

in the possession of some families of Asclepiadae. One of the sons of such a family was Hippocrates, the presiding genius of the sanatorium at Cos. Here he studied in the fashion of our English Sydenham, noting down all manner of symptoms and slowly broadening precedents. Here he wrote the books which are justly regarded as the fountain-head of medical literature, and here he founded the renowned School of Cos, which radiated its influence in doctrine and practice for centuries through all the centers of Greek medical learning, and shone supreme until Alexandria eclipsed it by still greater fame. . . . The books which Hippocrates himself wrote—some six or seven in number—became the nucleus of a mass of literature from the pens of his followers. This took his name as naturally and readily as Proverbs and Ecclesiastes took the name of Solomon."

This writer says that the best-known schools of medicine in rough order of time appear to have been Crotona, Rhodes, Cos, Cnidus, Pergamus, Cyrene, Miletus, Ephesus, Alexandria, Smyrna and Tarsus, and goes on to mention the divergences of medical opinion which resulted in the formation of sects, such as the Dogmatists, Empiricists, Methodics, Pneumatics, Eclectics, etc. He names Herophilus and Erasistratus at Alexandria as two of the foremost anatomists of the ancient world engaged in vivisection, and remarks that it was probably "near to the Serapeum, or temple of Serapis, which was the chief hospital standing on the western side of the city, that the mysteries of the sensory and motor nerves were first partially cleared up by these two men." Continuing (p. 37), he says:

"Summing up and gathering into one view what we know of the above schools, we may say that around the Mediterranean seaboard, in all the chief cities under Grecian influence, from the time of Hippocrates to the last days of Luke, the teaching of scientific medicine was making itself felt. Physicians occupied in some places the position of officers of public health, paid out of public funds. Before appointment they had to state the name of their teachers and their own qualifications. Men . . . found their way sometimes to the best appointments in the Sanatoria, or gained public lectureships in the universities of Athens and Alexandria."

On page 38 occurs the following:

"It is a common feature of all the above-named schools that they followed the true scientific method of observation, experiment, and theory subjected to tests for verification. . . . They sought to establish the reign of law in the relations between bodily and mental ailments and natural causes. Outside these schools everybody believed in supernatural demonic powers. . . . In striking opposition to this, Greek medicine sought, from Hippocrates downwards, to find the causes of disease and death in the tissues and humors of the body, and in the influence of foods and physical environment. Its view of mental disorders was similar to its views of bodily ones. Perhaps the greatest work of Hippocrates was his attempt to explain various kinds of madness as due to natural causes—physiological and climatic. . . . Thus does Hippocrates attack the superstitions of his time. Although he probably knew Socrates and was acquainted with that philosopher's belief in his demon, he would not allow demonic agencies to be classed as the causes of disease."

Such, therefore, in reasonable conjecture was the scientific basis on which Luke builded as a

physician, and that he was well-grounded in this domain of science is conceded by Ramsay, Hawkins, Hobart, Harnack, and others, who recognize him as the source of the third³ gospel and the Acts.

In order to show Luke's skill and correctness in the use of medical words and terms, Naylor reviews many of the stories of healing, and bears witness to the suggestive and technical accuracy with which he employs them; and this extends even to inanimate things, as for example, the undergirding of the ship that went ashore in the storm on the Malta coast was described in language which suggests a giant with broken ribs, whose fractures were being bandaged in an accident ward—the word for ropes being almost an ambulance term for bandages. An interesting suggestion in relation to the illness of the father of Publius, reported as having been healed by Paul, is that instead of being gastric or typhoid fever it was really an ancient diagnosis of what is now known as Malta fever, of an undulant type, the germ of which, as has recently been proved, is communicated to human beings through the milk of the goats of that island.

Well-equipped in his profession as Luke certainly was, he must yet have kept an open mind, eager for all that was new in his calling, responsive to humane promptings; and, when tales of marvelous cures, wrought in nearby lands, reached his ears he must have felt strongly moved to see for himself such striking manifestations in the healing profession. True, this is an assumption but consistent with probabilities, for no trustworthy data remain to show the motive, place, or occasion for the first meeting of Greek medicine with Christian religion, as represented in the persons of Luke and Jesus—if such actually occurred—an event unique and momentous of its kind in that the highest Greek intelligence confronted a form of religious doctrine which was to become of world-wide extent, and which was in many points clearly contrary to Greek conceptions.

With the two principles mentioned weighing within him, as they faced each other in the arena of mind and conscience, and with the likelihood that then, if ever, began the tempest to his soul, the chief figure in this dramatic picture is thus presented by Naylor (p. 40):

"Turning now to Luke either as student, possibly at Tarsus, or young practitioner. . . . at Antioch, or more probably as family doctor of Lydia at Philippi for six years—during which he might now and then be called to the camp to tend a Roman soldier and maybe the Praetor himself—or giving his services to all the sick folk at Malta, or settling down to practice in Rome and finally at Ephesus, we ask what his opinions were as to the causes and cures of bodily and mental afflictions. The question is interesting and significant if he was, as is assumed, a trained physician and a Greek—probably the only one in the Christian church in his time. And the answer is not difficult;

3. It seems clear that Luke's gospel was second in order of production. It is spoken of as third because it so appears as printed in the New Testament.

for when we look into his gospel and Acts we find his general attitude clearly set forth. His medical opinions were evidently widely different from those of the Greek schools, and his particular view of demoniac possession quite opposite. . . . We conclude, therefore, that Luke as a Christian physician stood both against the spirit and teaching of Greek medicine from Hippocrates down to his own day."

Here, then, the issue is sharply defined, the crucial point is reached—for if the foregoing be true, Luke was an apostate to teachings which during the ages had been shaped by many men of commanding intellect through medical observations, experiences, experiments and tests, infinite in number, into a science resting assuredly on the rock of truth.

To either deny or affirm understandingly the verity of this accusation is scarcely possible, because of lack of wide facts in the case; for, as the presentment stands, hardly more than inferences, such perhaps as reason may approve, may be offered—in brief, conditional provisos rather than definite findings.

In my former paper this difficulty with respect to Luke was glanced at and comment made as follows:

"His passion as a physician was for the cure of sick and distressed humanity, having been drawn professionally to embrace the new faith by manifestations of healing power in one greater than himself, and as a zealous disciple he thus justified and declared his profession.

But it is to be remarked that *he nowhere claims for himself the possession of miraculous powers or intimates their exercise by him*; it is only as a possible onlooker, or as scribe or chronicler, that note was taken of cures wrought in disregard of all physical laws as now known or understood in medical doctrine—a possible compromise between the science of the physician and the faith of the disciple."

Further study has not changed the opinion above expressed, although it will be admitted that on the surface of his gospel and the Acts the contrary view finds support. Luke's position with reference to the apostolic group who toured the Levant in divers journeyings is not made altogether clear, but it would seem that, by reason of his gift of letters and high order of mentality, he was chief in counsel and direction, in charge of the chronicles or records of the company, besides holding the post of master physician. Of cultured apt intelligence and noble imagination, his genius showed itself in less obtrusive manner than did the actions of the men of coarser grain and ruder fiber who were his companions. And, it is repeated, he nowhere gives proof that, personally or professionally, he yielded his footing on scientific ground; although, no doubt, through tactfulness and good policy he often bent to the gusts and waves of religious sentiment and psychic emotion which surged around him when reputed miracles were being enacted.

In commenting on what he speaks of as the singularity of Luke, Naylor says:

"The suggestion is here offered that the best explanation open to us is that the scientific influence of Greek

medicine upon Luke's mind was overborne by that of Paul and by his experiences in the Jewish-Christian atmosphere in which he certainly lived from the time of meeting Paul at Troas, if not from an earlier period of connection with the church at Antioch. That both Jews and Christians believed in demons is patent. Paul had no doubts about them."

Other similar points are raised, but nevertheless, Luke, as a writer of memoirs, spoke almost impersonally and without self-commitment respecting the verity of miraculous healings—and this is the saving grace of a rather clouded situation. There are incidents caught into the narrative of the Acts so inapt in conception and style as to suggest piece-work, and such as would argue against Luke's responsibility therefor. An example is the story of Seeva and his sons, which corresponds with what would be looked on to-day as a mere brawl prompted by the spirit of wine, rather than any other spirit, and affording a chance for an ungracious thrust at disbelieving Jews—the whole account showing bias and spleen. Luke's native sense of good taste as a Greek, if not his religious forbearance, would have guarded him against such an unlovely fault.

An interesting sentence from the closing paragraph of the paper of Mr. Naylor is as follows: "Some day we may know how a Greek physician came to write the story of Bethlehem"—but by what means this knowledge is to be gained is not hinted at. Whether by growth of the power of analysis and critical insight a new light will be afforded from the original text, or by records and documents as yet unknown, does not appear.

The use of the word supernatural, in the sense of miraculous, implies a paradox, for the reason that whatever falls within the ken of a single human mind by that fact at once becomes natural, although it may be unique and known only to the person whose brain received the suggestion or conceived the thought; and the possessor may choose either to pass it on to the world to become a part of the common stock of knowledge, or he may for the purposes of personal pomp, power, privilege or profit seek to cloak the special perception with mysteries or solemnities and thus, perhaps, impose on the hopes, fears, credulity or weaknesses of his fellowmen.

Therefore, nothing that is sensed by sane human discernment can be supernatural, for the physics of the brain—circulation, nutrition, coordination, etc.—must actuate before the psychics of intelligence—thought, sensibilities, emotions, etc.—can find any expression whatever.

It is scarcely believable that a man of Luke's balanced genius and poise of mind could have consented to any course that was other than honest toward himself, as a physician, personally and professionally, and being thus true he could not be otherwise to the world. But it has chanced that the religious cause to which he lent the powers of a remarkable imagination has had the effect of eclipsing somewhat the faculties of intellect—judgment, reason, common sense, etc.—

that came directly into action in his medical work.

A man—no more, no less—the ascription to him of saintship can add nothing to the distinction conferred by intellectual integrity as a physician, and imaginative insight as an apostle. In the rôle last named he gave body to the visions, and voice to the hopes and romances of the new religion in song, story, and drama with a clearness, cogency and charm that from the beginning must have had a powerful effect on the feelings and emotions of those addressed, and which, no doubt, often proved the final factor in gaining a hearing and winning acceptance for Christian belief throughout the world.

He served well two masters whose missions were in purpose much the same, and builded his life-work in symmetry on the rock of science as well as the rock of faith.

The elements of his success were two-fold, namely, the constancy with which he struck the note of human sympathy and common brotherhood in his concern and care as a physician for the sick and distressed in body or mind, and the crowning appeal to the sentiments and feelings of womanhood and child-nature in the tale of the nativity at Bethlehem.

The distinction having fallen to Luke of stressing these twin keynotes, as minstrel of good tidings of great joy, it then became of small consequence who might come afterward to fashion the tenets, write the rules, frame the dogmas or starve the doctrines of Christianity, as it is known in present time.

It was a law of the ancient Greek mind to seek the golden mean in things intellectual, especially on scientific lines, and accordingly the suggestion is ventured that the mentality of Luke was still governed by this ingrained law, and that he borrowed from the Christian faith the element of psychic healing-power to the extent that his reason and judgment approved, and in which the medical science of Hippocrates was obviously lacking.

This would have been strictly in line with the natural development of scientific medicine, but its normal course was thwarted and overflowed during many later centuries by ecclesiastical and popular superstitions—the influences of priestcraft, pietism, puritanism and the like, with their ready acceptance of witchcraft, occultism, magic, diabolism, etc., tending to confuse and confound psychical powers in healing with those that were in their nature physically impossible; and in illustration of this the cases of the madman of Gadara, and the man at the Beautiful gate “lame from his mother’s womb,” are instanced.

The failure to draw a line of sane demarkation between such conditions and phenomena, and which Luke as a physician probably perceived, has had the effect of seriously hindering progress in this branch of knowledge, and only within recent times has its full importance been realized.

It is held by some writers of history that the course of human progress in mental development and knowledge takes the form of a rising spiral, and that at times humanity can look over its pathway, trace its own past course, and take note of its advancement from age to age.

Therefore, may it not be true that in psychologic medicine this turn or stage has been reached, and promises that failed of fulfilment centuries ago, reappear as problems for study and solution by the medical profession to-day? In support of this view may be cited the extreme vagaries of Christian science, wrongly so-called, and what is termed the Immanuel movement, which, rightly understood in spirit, invites discriminating judgment and inquiry from physicians respecting its validity and aims.

It is, perhaps, safe to say that no other man in his time was so well fitted as Luke to judge rightly in questions involving both science and faith; and this ability sprung from the nature of his vivid and varied Greek mentality. It is equally safe to say, probably, that not once in a century does such a combination of rare intellect and imagination appear as was presented to the world in the theater of his different activities. And the science of medicine to-day has cause to regret that the genius of Luke in the rôle of physician is not equally as well known as are his gifts in the sphere and dominion of religious

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BRAIN SYPHILIS

A Case Report with Post-Mortem Findings *

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The following case is of interest, first, because the symptomatology was checked up with a post-mortem examination. It is so rarely that we are permitted to study the anatomy of such patients that the reporting of the findings where post-mortem examinations are made becomes a duty. Secondly, the case is of interest because of the negative Wassermann reaction, and negative spinal fluid. If we are to treat syphilis entirely according to the results of our Wassermann tests, as Heidingsfeld would have us do, then we would err grievously in such cases as this. Evidently the clinical evaluation of the symptomatology must be considered of some value—even if not of equal value with a Wassermann.

Again the case is of interest because it arouses the query whether the injection of the salvarsan did not set up the ependymitis and meningitis. If it did not do this its effect was entirely negative, for it produced no change in the patient’s condition otherwise.

The following notes are based on the records kept by Dr. H. E. McCarthy, House Physician to the German Hospital:

* Read before the Kansas City Academy of Medicine, Nov. 1, 1913.

Wm. T., 26 years old; married; upholsterer.

Present Complaint.—1. Has desire to urinate every thirty minutes day and night and upon trying can only urinate small amounts. 2. Dull occipital headache. 3. Ptosis of left eye lid. 4. Impairment of vision in left eye.

Family History.—Mother died of tuberculosis, age unknown. Father dead, accident, age unknown. One sister alive, 35 years of age, well. One brother alive, 28 years of age, well. Three aunts, two uncles died of tuberculosis. No history of tumors, epilepsy or insanity.

Personal History.—None of drug habits. None of continued masturbation. Drinks about five glasses of beer each day; does not drink whisky. Gets drunk occasionally, not often. Sexual power normal.

Past History.—Had measles and whooping cough when child. No history of rheumatism. No history of any accident. Had gonorrhea at 14 which yielded to treatment in two weeks, leaving a slight stricture which in turn yielded to dilating treatment. Two years later had another attack of gonorrhea which was cured in a short time.

At 18 years had a sore on the penis which was located on the foreskin, was single and did not cause much pain. Was treated by a number of physicians in the course of a year and about one year after obtaining sore, or five years ago, went to Dr. F., who gave him 606 and started mercurial treatments. After the injection all symptoms left and he became apparently well until about three months ago when he became nervous, weak and was troubled by a continued tired feeling. Two weeks ago patient had a chill followed by another the next day; thinks he had a temperature but didn't vomit nor show any gastrointestinal symptoms. This is the first time he noticed the ptosis of the left lid. Had severe frontal and temporal headaches, starting early in the morning and running until about 10 o'clock, partially stopping, then becoming worse at 3 or 4 p. m. and continuing until late in the evening. At this time Dr. J. was called and the second injection of 606 was given intramuscularly. Patient has not improved since the injection.

PRESENT FINDINGS

Inspection.—Patient is a slender, rather thin, male with scanty front hair and high forehead, well formed ears and nose. Ptosis of left eyelid, dilated pupils, drooping of left corner of mouth. Neck shows pulsation of jugulars and slight pulsation in suprasternal notch. Chest flat and depressed interspaces with a depression above and below the clavicle on the right side. Apex beat at fourth interspace inside the nipple line and moderately strong. Two scars on his back, said to be points of injection of 606. There is also the scar of a resected inguinal bubo. Indurated sore on penis still discernible. Legs and feet O. K. Patient can walk with difficulty for a few steps and then may fall to the floor.

Palpation.—Shows vocal fremitus equal on both sides of chest. Pulsations and apex beat noted on inspection confirmed. Abdomen slightly retracted and hard (muscles rigid) and shows slight tenderness on pressure. Prostate normal. Pulse is slow, full, regular compressible and equal on both sides. Blood-pressure 110-70.

Percussion.—Shows dulness in right apex and below angle of right scapula. Heart not enlarged. Liver and spleen O. K.

Ascultation.—Heart shows strong sloping impulse at the apex with an accentuation of pulmonic second sound. No murmur audible, but beat is diffused all over chest and is quite loud. Aortic sound no murmur. Chest shows few râles, mucoid in character, in apex; but no cavities present that can be demonstrated.

Nervous Findings.—Left eye shows complete ptosis of lid, slow limited reaction to light, none to accommodation. Motor power of the bulb is limited in all directions and no action at all of external rectus (abducens lähmung). Vision disturbed by weakness of accommodation. Right eye: Reaction slow but better than left and although there seems to be a slight limitation of movements of eye still all movements are obtainable. No diplopia. Ophthalmoscopic examination shows pallid disks—not choked—turgid vessels. Vision: within normal limits. Mouth: Drooping of left corner and an inability to smile or whistle. Tongue on protrusion comes out of right corner of mouth.

Abdominal reflexes present and equal. Cremasteric reflexes present and equal. Knee jerk absent on both sides. Oppenheim positive and equal on both sides. Chaddock positive and equal on both sides. Babinski positive and equal on both sides. Romberg present. There is a variable spasticity of the muscles of the lower limb. (Both legs showing myotonia.)

Sensory Tests.—Tactile sense seems to be the same all over the body—no variation from the normal. Sense of pain to prick of needle present over all parts of body and no variation from normal. Taste sense is absolutely normal as is also sense of smell.

Hearing Watch Test.—Right air conduction 2-4 inches. Left air conduction 8-12 inches. Bone conduction reduced on both sides.

There is a tendency to repetition of some of the consonants in saying alphabet over or the stuttering over m, n, r.

Mind's activity is not good and answers to questions are slow and questions must often be repeated.

There is a retention of an average of fourteen ounces of urine in twelve hours and a tendency to constipation.

Urine.—(Catheterized specimen) negative; acid; 1020; phosphates. (McCarthy.)

Blood.—Negative, except a low leucocytosis. Hb. 70-80. W. b. e. 9,600. Polys. 78; l. l. 14; s. l. 8. (McCarthy.)

Wassermann.—Negative. (Trimble.)

Spinal Puncture.—Slightly increased pressure; clear fluid; negative Wassermann; negative lymphocytosis. (Trimble.)

The von Pirquet negative twice.

DISCUSSION

On the patient's entrance to the hospital the diagnosis inclined toward a bulbar paralysis, because of the paralysis of the tongue, muscles of deglutition, facial nerve, abducens, etc. (cf. Strümpell, Appleton's edition, II, 449). This was rather confirmed by the incipient improvement, so that it really did look like a ease of minute hemorrhages in the pontine—bulbar region. The temperature curve also confirmed this opinion.

But the patient's rapid sinking into somnolence with no apparent extension of the process led us to consider the possibility of sclerosis rather than hemorrhages in this region.

The negative Wassermann, the negative lumbar puncture and the absence of pain kept us from thinking seriously of a meningitis. The absence of a choked disk and the very slight increase in pressure of the spinal fluid kept us from considering tumor or any seriously increased pressure.

In short, we concluded that it must be a degenerative rather than an inflammatory process. We located the lesion in the motor tracts in the pon-

tine area—and concluded that it must be a diffuse rather than a sharply limited lesion. The onset was so rapid and the worst lesions so definitely of the bulbar type that we did not consider the cord seriously affected, but placed the lesion in the upper neurone—a sort of *tabes encephalica*.

COURSE OF DISEASE

Temperature.—On entrance was 99.5 and showed a hectic character, running from below normal to 101.5. But from the tenth day and on it rarely reached even normal, varying from 96.5 to 98.

Sphincters.—At first the patient had partial control of both bowel and bladder, but after a few days there was complete loss of control in a condition of flaccid paralysis.

Appetite.—Variable. At first he expressed a feeling of hunger, but later on showed a complete indifference to food. Toward the end he could swallow only with the greatest difficulty.

Vomiting.—After a preliminary improvement as to nausea and vomiting, he gradually became so bad that in his irregular vomiting he lost much of the food that he did succeed in swallowing. Vomiting was accompanied by some nausea, but was easy and of the projectile type.

Sleep.—At the beginning his sleep was disturbed and beset with delirium, even to the extent of getting out of bed and walking about. Later on he lay very quietly during the night, though during many nights he did not seem to close his eyes.

Coordination.—Patient was always able to use his voluntary muscles as he wished. He could always locate his great toe with his eyes shut. No astereognosis.

Hiccough.—Was troublesome about the seventeenth to nineteenth days.

Heart Action.—Regular and uniform to the end. Pulse 72 to 120. Pulse was perceptible at the wrist one-half hour before death.

Respiration.—Unaffected. The rate varied from 20 to 24 per minute.

Cystitis and Epididymitis.—When patient entered hospital there was a yellowish discharge from urethra. This cleared up under daily irrigation. An epididymitis developed but lasted only three or four days. Probably the cystitis was the cause of the fever that he showed, because as soon as the inflammation was cleared up the temperature fell to subnormal.

Vision.—Remained within normal limits, although binocular vision was disturbed by the paralysis of bulbar muscles of the left eye. The pupils reacted sluggishly to light and also to accommodation. Paralysis of the ocular muscles showed variation. After some ten days' treatment all the paralyzed muscles showed at times increased power and this was retained to the end.

Speech.—This also improved and remained clear to the end.

Dysphagia.—This did not improve and at the end was complete.

Consciousness.—This remained present up to within a few hours of death. The mind was sluggish and it required sometimes an effort to arouse the patient's attention. But his mind was clear though slow. At night, however, in the beginning of his stay at the hospital, he would talk irrationally. From the twenty-eighth day on he made mistakes in the identity of his visitors and his memory was entirely untrustworthy.

Treatment.—Potassium iodid in doses of 135 to 225 grains pro die combined with stomachics. Strychnin 1/20 gr. by needle and hydrotherapeutic measures were employed.

Death occurred on the thirty-third day of the patient's stay at the German Hospital. This would make the whole course of the disease since the first symptom only four months; and since the acute symptoms (ptosis, chill, etc.) only six weeks.

The *post-mortem examination* of the brain showed a slight bulging of the left side, especially over the temporal lobe.

The lateral ventricles were dilated, the left more than the right. The choroid plexus was not dilated—on the contrary, it seemed somewhat smaller than usual.

The nuclear tracts from the internal capsule to the pons were not symmetrical, the left showing an apparent decrease in the gray substance.

The central canal was closed from the floor of the fourth ventricle down as far as the cord could be cut.

The fourth ventricle measured $1\frac{1}{8}$ by 1 by 1 inches, after being hardened in formalin; was not symmetrical, but pressed more on the left side. The structures, therefore, on the left were thinner than on the right, and in such a way that the gray matter was decreased more than the white.

On microscopic examination a lepto meningitis (syphilitica) was found, most developed about the bulb and lower pons. The central canal was obliterated by a round-cell infiltration at the height of the olives. An arteritis was evident in this same area with infiltrative processes extending deep into the brain (or cord) substance.

In the pons irregular patches of degenerated tissue could be made out, in which a degeneration of the pyramidal cells was the most noticeable feature.

Summing up the post-mortem findings, we conclude that the initial process was a degenerative one; that at the time when the salvarsan was given an acute leptomeningitis and ependymitis was started up, which, through pressure on the vital centers, brought about death.

My thanks are due to Dr. McCarthy the resident physician; to Dr. W. K. Trimble, who performed the Wassermann reaction, spinal fluid analysis and conducted the post-mortem examination; to Dr. A. L. Skoog, who saw the patient with me, and to Dr. O. L. Castle for help in the microscopic studies.

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VINCENT'S ANGINA WITH A CASE REPORT *

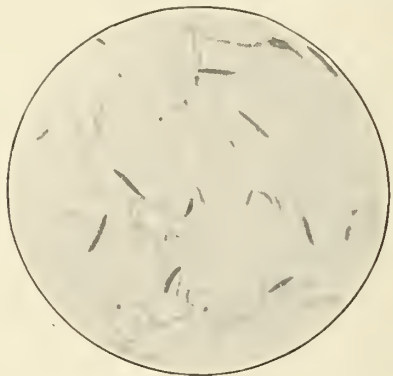
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In 1896 Vincent, a physician in France, reported a form of ulcerative angina due to a fusiform bacillus and a spirillum. This was followed by a few reports of similar cases from other

* Read at the Southeast Missouri Medical Association, Charleston, Mo., Oct. 15, 1913.

European physicians. In 1902 Mayer reported a case in the *Journal of the American Medical Sciences*, which was the first case of this disease reported by an American physician. This report was followed the next year by Fischer, who reported two cases in the same journal.

In the issue of July 23, 1904, of the *Journal of the American Medical Association*, the late Dr. Geo. C. Crandall, a former teacher of medicine in the St. Louis University, reported a case occurring in a medical student. This was the third report of this condition occurring in America, and was the first time my attention was called to the matter. Since that time an occasional reference has been noticed in the literature, but it has not yet reached that degree of importance in the minds of American medical authors as to demand description by some of our leading text-books. No mention of it is made in Osler's *Modern Medicine*, the latest edition of *Ander's Practice* or in a late edition of *Parke's Pathogenic Bacteria and Protozoa*. However, a recent edition of *Osler's Practice* gives a few lines to the descrip-



tion of this disease in the discussion of the differential diagnosis of diphtheria. Simon's *Clinical Diagnosis* gives a fine picture of the organisms as well as a bibliography of the subject. Zahorsky's admirable little book, *The Golden Rules of Pediatrics*, mentions the diagnostic importance of Vincent's angina as well as a few lines on its treatment.

As few cases of Vincent's angina are reported, the following case will be of interest:

Mrs. Maggie S., aged 26, married, mother of one child; good family history, had always been healthy with the exception of a severe attack of diphtheria during her childhood; called at my office July 11, 1913, complaining of a sore mouth and a sore throat of six weeks' duration. She said her tongue first got sore on the edges and this was followed in a few days by headache, general malaise and a sore throat. Coming with these symptoms, she had noticed a faint macular eruption all over her body which was present when she visited me. She had taken no treatment of any kind and said the condition was getting painfully more aggravated.

An examination of the throat and mouth revealed a marked congestion of the fauces with gray patches about one-fourth of an inch in diameter adhering tenaciously to the soft palate on either side of the uvula, also on the edge of the tongue and beneath it

and on the inside of the lower lip. The breath was foul and the tongue was coated. The temperature and pulse were normal; the submaxillary glands were somewhat enlarged, but otherwise the physical examination was negative.

With a clean throat swab I brushed one of the patches on the palate, made a smear preparation stained it with Wright's stain and found the fusiform bacilli and spirilli of Vincent in large numbers.

Treatment consisted in first painting the patches with a solution of iodine and glycerin; then prescribing a gargle composed of equal parts of peroxid of hydrogen and the liquor antisepticus of the National Formulary, to be diluted once or twice with water, also five-grain doses of potassium chlorate in solution to be taken without water every three hours.

She made a rapid improvement and in a week was practically well. Living six miles away she did not return to my office after her first visit and I therefore only had the opportunity of observing her at that time. After the subsidence of the mouth and throat symptoms, the faint muscular eruption persisted and was present when the patient left our county, two weeks after I saw her. I cannot explain this skin phenomenon.

All literature on the subject which I have consulted states that this disease sometimes assumes a very malignant form resembling noma, and in the leading article of *Merck's Archives* for August, 1913, Dr. Leo Green of New York advances the view that noma or cancerum oris is but an aggravated form of Vincent's angina neglected at its inception. As a method of early eradication of the disease he advocates the use of applications of 20 per cent. trichloroacetic acid. Dr. Crandall, in his case-report, says it is very resistant to treatment, and he used as a gargle 2 per cent. carbolic acid in a 1-1,000 bichlorid of mercury solution. Zahorsky says potassium chlorate is a specific. That it is a communicable disease, there seems to be no doubt.

It is of interest on account of its close resemblance to diphtheria and to the mouth and throat manifestations of secondary syphilis. Its differentiation from these affections is made by a study of the stained smear of the exudate as well as close observation of the clinical symptoms.

I believe this affection is more common than has heretofore been recognized, and if it is true that noma is Vincent's angina neglected at its inception, it is high time that our medical authors give it the place of importance in the text-books that it justly deserves.

SOME METHODS OF PROMOTING INTEREST IN THE COUNTY MEDICAL SOCIETY *

GEO. W. GOINS, M. D.

TOOELE, UTAH

Having been secretary of a county medical society for some years, I can, at least, appreciate some of the hindrances which prevent the county medical society from attaining that degree of usefulness to its members which is to be desired.

* Read at Medical Secretaries' Annual Meeting, 1912.

In recognizing the difficulties which hinder the county society's usefulness, naturally some methods of overcoming them are to be sought, but, first of all, I will mention what seems to me to be the chief handicaps to the efficiency of the county medical society.

HINDRANCES

Lack of devotion to the society by members.

Professional jealousies and backbitings.

Lack of scientific and clinical training.

To promote interest in the county medical society there must be at least one member with an untiring willingness and energy for the service of the profession. The secretary is usually the one on whom the most devolves. He must be the general manager; get up the programs; collect the dues, and attend all meetings; if that was all, his position would be comparatively easy. The real task, however, is to secure the devotion of the members to the work and to get them to attend the meetings. Some members will permit their names to be on the program time after time but never be present to perform the part. All sorts of excuses are given by members for not attending the meetings and by non-members for not joining the society. One will meet you and say, "Doctor, I regret being unable to attend the meeting of the society, but I had an obstetric case in one of my good families and it was simply impossible for me to get away." Another says: "I was just too busy; why, I have not had time to eat or sleep for the last month. I could not attend but I hope to be with you next time." Still another says: "There is Doctor —— who is a member of the society and usually attends; now, you know I do not like him and therefore I cannot attend the meetings." The real excuse, however, is lack of interest. The question is, How shall we secure interest?

If the medical organization is worth adhering to, and if it is worth paying dues to, it is worth cultivating. How shall we cultivate it? I answer, by attending the meetings of the society, taking part in the program, and mutually advancing scientific knowledge among the membership. It is a mean man who has no idea or opinion that is worth his fellows' consideration. I hold it to be the professional duty of every upright medical man to affiliate with medical organization, and do all that may reasonably be expected of him to promote it in the community and county in which he resides. That is the ideal; in reality it is not found, but now let me suggest that which will further the ideal as I see it, i. e., that which will secure the devotion of the members of the county society.

First, the county society should meet frequently, at least once a month, and where lack of distances permit, weekly meetings would be better. Let the meetings be migratory; when

members of a certain community are showing a lack of interest take the meeting to them.

Secondly, cultivate a good fellowship. The more frequent the meetings the better the fellowship; mutual understandings accrue, an *esprit de corps* develops that plucks thorns from the paths of those who give unstinted time and service to the work of the society; roses bloom where thistles grew before. Men learn to appreciate men, to magnify their amiable qualities, and minimize their frailties. This is charity—the essence of the medical profession. Why not extend it to our fellow-toiler? It is Arabian perfume to his panting nostrils. How oft does it lighten his burden and spur him on to nobler deeds! How oft does it rob the cold midnight of its bleak chill, and the sultry noonday sun of its heat! Medical men should be to each other the warmest of friends. Medical men should cultivate humanitarian ideas toward their confrères; they should try to make themselves of service to the profession and thus secure a larger measure of happiness to themselves. The problems, the trials and tribulations of medical men are very similar, and the coming together in a common cause should develop a comradeship.

In every county society a course of study should be followed for the diffusion of scientific knowledge. I think the course of study should be the choice, by election, of the majority of the membership. Cases for clinical demonstration should be presented as often as practicable. In the absence of clinics, well selected case histories may be used to excellent advantage. A copy of the case history is submitted to each member for diagnosis, prognosis, treatment, and any other comment that may be provoked. An instructor is selected from the membership for each meeting, or for a subject. Members should read systematically; there is a wealth of knowledge in books and current medical literature; application will be rewarded with greater knowledge, better service, and pleasurable confidence in one's own ability. If one would read studiously and systematically, but one hour each day, he will be surprised how much is accomplished in one year; multiply that by ten, twenty, thirty, and in some cases forty years; the result is that no physician of ten years' experience and practice can give a tenable reason for having only a modicum of medical knowledge; he should have risen above mediocrity; if he has not, he is indolent; he has not grasped the opportunities that lie within his easy reach; he should attend the county medical society; it may be that his ambitions may be aroused. In the medical society we should meet as a band of workers with a common purpose and for a common cause, viz., the life, health and happiness of humanity. Every member should be an industrious student; when a book is found of more than usual interest it should be spoken of to

others; when an article that is worth while is found in a journal, pass it around. You may say that these suggestions are common-place, but I insist that all who practice them will become better physicians. The intention of the county medical society is to cultivate fellowship and disseminate medical knowledge. For those who fail to attend, it may be said that they are basely selfish or grossly ignorant; if selfish, the medical society will help to overcome this failing, and if ignorant, it will add knowledge. So the county medical society is the panacea for many ills of the profession.

For professional jealousies and back-bitings, I may add to what has already been said relative to the cultivation of fellowship that a study of the Code of Ethics (*The Journal of the American Medical Association*), individually and collectively, will aid much in abolishing these short-comings. There are many breaches of ethics due to the lack of knowledge on the part of the offender. A courteous conference between the parties interested in the breach of ethics is often conducive to good results; and a general discussion of breaches of ethics before the society gives each member a knowledge of what is proper conduct toward his confrère.

Then to recapitulate—the remedies I recommend for promoting interest in the county medical society are:

Frequent meetings.

A course of study.

Clinics and well-selected case histories.

A study of medical ethics.

THE TREATMENT OF INTERNAL HEMORRHOIDS*

ROLLIN H. BARNES, M.D.

ST. LOUIS

Palliative treatment may occasionally cure hemorrhoids, provided they are used sufficiently early in the process of the disease. They are seldom seen by the physician in this stage. This means the treatment of the local inflammation, especially of the anal canal. They may never recur but it is a difficult matter to impress on these patients the importance of treatment sufficiently long that you may effect a cure.

Three methods of operation for internal hemorrhoids are recognized to-day, the clamp and cautery, the ligature and the Whitehead methods. These methods are accepted because no one has been able to recommend better. They are not in accord with modern surgery. They are destructive and do not conserve the remaining parts. They are exceedingly painful; probably the Whitehead, if properly performed, is the least

painful and it is less liable to secondary hemorrhage. The clamp and cautery and the ligature methods are followed by a slough which makes them liable to secondary hemorrhage. Skin tabs are common following these methods. The Whitehead operation should only be used when there will not be sufficient mucous membrane left after the removal of the diseased parts to cover the anal canal. The use of the ligature in this region is apt to be followed by infection.

I desire to present a clamp which I have devised that I believe is an improvement on these methods and that is more in accord with modern surgery. The clamp is applied longitudinally with the length of the bowel at the base of the hemorrhoid so that the hemorrhoid may be cut off with a clean incision just external to the clamp. The clamp is left in position for at least ten minutes to control hemorrhage, the clamp removed without cautery or suture being used. The clamp has a detachable handle so that leverage may be avoided for leverage may tear the mucous membrane when the clamp is allowed to hang while other hemorrhoids are being similarly treated. The clamp is made in sets of three. The wound does not gap apart because the surrounding muscles of these parts have the tendency to hold it together.

The following are the advantages of this method:

1. The clamp does not crush the tissues and the minimum injury is done to the remaining tissues, hence the greatest resistance against infection.

2. The surrounding muscles keep the wound from pulling apart so that no suture is necessary, hence another minimizing of the chances of infection.

3. The clamp controls the hemorrhage and because there is no crushing or cauterizing of the tissues and no sutures there is less pain than when following the other methods.

4. No slough occurs because we have a clean-cut wound without injury to the remaining parts. Hence fewer skin tabs are found following the operation.

5. For these reasons the wound heals in at least half the time of the other methods.

6. It is not necessary to dilate the sphincters so much and less trauma is necessary.

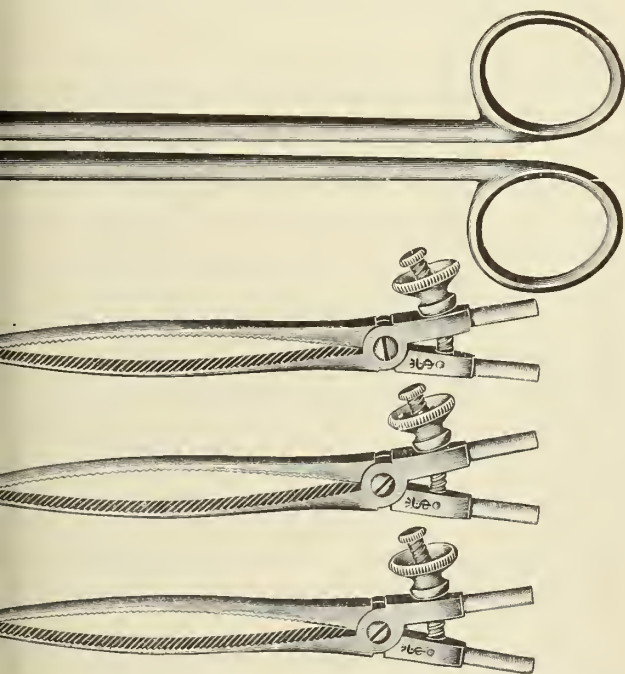
7. The operation can be done under local anesthesia more readily than the other methods but we all know that the sphincters make it impossible to be certain, without general anesthesia, that all the hemorrhoidal tissue has been removed. I disapprove of the introduction of the hypodermic needle into tissue that is not to be removed on account of the danger of infection in this region.

The only criticism that has been made to this method has been that hemorrhage might be

* Read before the Alumni Association of St. Louis University School of Medicine, Jan. 24, 1913.

dangerous. From my experience in seventy-five cases I have had two hemorrhages and these both occurred within two hours after operation and were not of any size. No secondary hemorrhage has occurred and I believe that there is less hemorrhage from this method than from any of the others. In both of these cases there were other reasons for the hemorrhage. In one, a clinic case who could not provide for hospital, a Whitehead operation was indicated. The mucous membrane was rotten and I believe the hemorrhage was due to tearing of the mucous membrane internal to the clamp. This patient was not in a serious condition, for having been provided a room near the ambulance entrance, he arose and unfastened the door the night of the operation.

The other case of hemorrhage was in an old syphilitic whose condition was generally bad.



The color of his skin was very dark, having the appearance of a mulatto, and he had lost much weight. On account of his generally weakened condition we used local anesthesia in the office. It was necessary to use considerable cocain, as much tissue had to be removed. The patient rode home on two street-car lines, about twenty blocks. After getting home he became sick, vomiting with much straining, and had a hemorrhage, the size of which was surely exaggerated by the patient for he was able to come the next day to the office and showed little signs of hemorrhage.

Another case, where three hemorrhoids were removed in the office, had a hematoma. One of the incisions extended into the skin and it was necessary to use a suture to keep the skin wound from pulling apart. External to the suture the hematoma occurred.

One case from Iowa had considerable irritability of the sphincters. He remained in the hospital for a week when he returned home. I had a letter from him stating that he went hunting the day following his return and that he killed twenty gray squirrels. After that he had had no further trouble.

A nose and throat specialist, who was afraid of a general anesthetic, was operated on in my office a Saturday afternoon. Three large internal hemorrhoids were removed. He went home in a taxi. A physician in the neighborhood catheterized him that night. Monday he went to his office and attended to business without much trouble.

Another physician from whom I removed a large internal hemorrhoid in my office under local anesthesia attended a confinement case the same night. I do not think that such can be accomplished following any of the other methods except it be the injection of carbolic acid and you all know the danger of that.

HISTORY OF MEDICAL ORGANIZATION IN CASS COUNTY, METHODS OF CONDUCTING ITS SOCIETY, AND WHAT IT HAS ACCOMPLISHED *

HARRY S. CRAWFORD, M. D.
HARRISONVILLE, MO.

Previous to the year 1900, the status of the medical profession was in a chaotic state. Bickerings and jealousies existed between individual doctors. Quacks, charlatans and patent medicine venders preyed on the gullible public. There was no union of action or thought. The medical profession was without influence, socially or politically; in fact, it was a disorganized body of the most intelligent men of the country, without any well-defined purpose, except individual livelihood and gain. Realizing the very unsatisfactory condition of medical affairs in this country the American Medical Association, several years ago, began a campaign to organize the entire medical profession of the United States. In 1900, a committee on reorganization was appointed to devise a plan of organization and report at the American Medical Association at St. Paul in 1901. This committee recommended a plan that was adopted, and since the meeting at Saratoga Springs in 1902, it has been in active operation with highly gratifying results. Within fifteen months after reorganization, 31 states had adopted the plan. At the New Orleans meeting in 1903, representatives of 44 states and territories made encouraging reports of the excellent work that was being done in reorganizing the medical profession of the country.

* Read before the Medical Secretaries' Meeting at Sedalia, Mo., April 21, 1912.

The Cass County Medical Society was organized in accordance with the plan recommended by the American Medical Association, at Harrisonville, Mo., Nov. 6, 1902, with a charter membership of 19. Ten additional members were elected very soon, making a total membership of 29. The charter officers were as follows: President, Dr. H. Jerard; First Vice-President, Dr. F. B. Ellis; Second Vice-President, Dr. G. E. Elley; Treasurer, Dr. A. R. Elder; Secretary, Dr. J. S. Triplett. Its meetings were held quarterly, but are now held the second Thursday in February, April, June, August, October and December.

If our society may be called successful, and we take a modest pride in considering it so, its success has, in no small measure, been brought about by following as closely as conditions would admit, certain methods which, in our judgment and experience, tend to fit us for the highest professional duty, and for the greatest public good.

Our society early realized that for the achievement of good scientific work and public influence it must have capable and untiring officers to conduct its affairs. The secretary, more than any other officer, must be a tireless, persistent worker, for upon him mainly depends the welfare of the society. The work and results of a society are the reflections of the qualities of its secretary. Our policy in regard to membership has been to receive all those who are eligible under our constitution and by-laws, and that if a physician becomes unprofessional, he can be disciplined better within than without society influence.

Besides always containing one or more scientific papers, our programmes are arranged for clinics, demonstrations and exhibitions of pathologic specimens. These latter, especially, offer something concrete and tangible, and are usually much appreciated by the members and are great aids in getting out a good attendance. We hope to lay greater stress on the clinic in the future. While we welcome visiting physicians to our meetings and invite them to take part in the discussions, we do not encourage the attendance of those so-called specialists who are seeking an audience for self-exploitation.

We are endeavoring to enlist the cooperation of the public in our work, and trying to show them that the things which we are striving for, are for the public good; taking the public into our confidence; pointing out to the public the dangers in meddling with quacks and nostrums. We invite the public to our meetings, and, especially, we are interested in having officers of the various social, political and religious organizations meet with us. Laymen have on various occasions taken an active part in our meetings. By cooperating with the public, members of our society have made addresses before public gatherings,

such as teachers' associations, etc., on which very favorable comments have been made. By these policies we are succeeding, to some extent at least, in establishing a public sentiment which cannot fail to bear good fruits. We are convinced that an occasional social affair is an essential to the better working of a County Medical Society. Our last social function consisted of a 6 o'clock dinner at the hotel, followed by a smoker and talks on subjects of interest to the general practitioner by our worthy State Secretary and several other gentlemen. It was one of the best and most enjoyable meetings it has been my good fortune to attend. This function followed a very successful and well-attended scientific program in the afternoon.

We believe we can justly be proud of the results attained in our county since we organized in 1902.

In 1896 Cass County was represented in the Missouri State Medical Association by four members; in 1897, by one member; in 1898, by seven members; in 1899, by five members, and in 1903, one year after reorganization by twenty-seven members. In 1911 we had thirty-two members, and this year, 1912, thirty-five members. We have prosecuted and convicted one quack and made it so unhealthy for this class of imposters that we are not bothered with them. In fact, in our contact with the public and our lectures to public school-teachers, students and at other public gatherings, we find the people are gradually learning the value of their home doctors and the worthlessness of the traveling quacks. Our social relations with each other have been improved, we have become better acquainted, have a higher and more profound respect for the opinions of our colleagues, and instead of being competitors we are co-workers and colleagues in the great work of conserving public health. Our ideas are broadened and our fund of knowledge improved by the reading and discussions of scientific papers at our meetings. We are inspired to observe and study the progress of medicines and keep ourselves abreast of the times and out of the rut. We hope in the near future to have every eligible physician in our county enrolled in our society. We hope to still further improve our social relations with each other and raise the standard of medical efficiency in our county. We hope to make our society meetings so interesting and instructive that our attendance will be greatly increased, and the discussions of the various subjects of great benefit to the members.

This is, briefly, what has been done in our county, and the same thing is being done in every county in Missouri, and it is what makes the Missouri State Medical Association strong, powerful and beneficial to her large membership and to the public at large.

THE JOURNAL

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JANUARY, 1914

EDITORIALS

THE EGOISM OF THE OPTOMETRIST

That optometrists seek to enter the medical field and cloak their business of fitting glasses with the dignity and prestige that attach to professional pursuits, is one of the principal objections to the passage of an optometry law. Denials by optometrists that such is their intent and promises not to mislead the people by high-sounding titles and attempts to treat disease, fell readily from their lips when the bill was under discussion in the legislature, but the medical men best informed with the intent and purpose of the backers of the bill refused to be convinced. We now present some evidence of the tactics optometrists have pursued and may be expected to pursue should these tradespeople ever obtain statutory laws authorizing them to tamper with sick eyes.

In Greene County there is a very active and progressive county medical society. Its members are always on the *qui vive* to correct conditions affecting the health of the people. They were instrumental in compelling the water company to give Springfield clean water; they are now actively promoting the medical inspection of schoolchildren; they worked with energy and intelligence in controlling a recent outbreak of typhoid fever; and they have prosecuted several notorious medical fakers with success, the latest being a chiropractor named Fenter, who was convicted and fined \$50 and costs for practicing medicine without a license. About the same time that proceedings were instituted against Fenter, an optometrist named W. E. Wyett appeared from nowhere and through the ready medium of uncensored newspaper advertising, told the people he was an eye and nerve specialist and was ready to cure all sorts of diseases by fitting glasses. The Greene County Medical Society promptly instituted proceedings against him and he was indicted for practicing medicine without a license. That was last March. The two cases—Fenter and Wyett—dragged through the courts until October, when the decision against Fenter was rendered. During this period Wyett's attorney endeavored to induce the society to drop the case against Wyett on the latter's promise to stop advertising. The society,

of course, refused. Wyett was not being prosecuted for advertising, but for practicing medicine without a license. Immediately following the conviction of Fenter, the chiropractor, Wyett admitted his guilt, and through his attorneys promised to leave the state and never practice here again if the society would drop the prosecution. The society agreed to this proposal, and Wyett closed his trial case, rolled up his advertising copy and disappeared for parts unknown.

That is the simple tale of the beginning and end of the first prosecution against an optometrist in Missouri as far as we are aware. It tells nothing, however, of the bitter feelings the optometrists in the state hold against the medical profession nor of the frantic efforts they made to prevent Wyett's conviction and of the appeals of his fellows to raise money and secure "expert oculists" to defend him—and they obtained both the money to defray expenses and licensed physicians willing to testify in his behalf.

Wyett's advertisement is typically and characteristically "optometric." It is a brazen, boastful assumption of powers to cure that deceive and mislead the afflicted. He styled himself "Dr. W. E. Wyett, Oph.D.," which, of course, has a learned and professional swing to it that easily dupes the unwary. "Piles, female trouble, kidney troubles, cross-eyes, glaucoma, etc.," he said in his advertisement, are caused by an excessive strain on the nervous system; indigestion, constipation, menorrhagia, dysmenorrhea, epilepsy, and St. Vitus dance are among other conditions caused by improperly adjusted "nerve current." and glasses will cure. O, it's a beautiful advertisement and must be read to be appreciated. We have reproduced it on another page for the edification and instruction (?) of our members.

Before leaving the subject, let us quote what the president of the Missouri Association of Optometrists is said to have uttered in appealing to the members of that trade for assistance in defending Wyett. We take the words from one of the trade journals: "We have clearly satisfied ourselves that this man has not violated the medical practice (law) by practicing medicine." And the secretary of the optometry association says: "Mr. Wyett (observe the Mr.) has not suggested or prescribed medicine nor any other treatment for the eyes but glasses; nor has he prescribed medicine or treatment for any other ailment whatsoever."

How exceedingly simple! Epilepsy, says Wyett. Your eyes are strained; I fit you with glasses and, presto, no epilepsy. So with St. Vitus dance, ditto piles and female troubles, and all along the long list of "ills the flesh is heir to," vociferate Wyett, et al.; but that is not practicing medicine, expostulate the optometrists.

Those physicians who incline to the opinion that opticians and jewelers are honestly seeking a law "to control the fakers" in their own trade should carefully digest the articles on another page and ponder awhile on the unbridgeable chasm separating the altruism of the medical profession and the egoism of the optometrist.

THE MEDICAL PROFESSION AND VENEREAL DISEASES

The recent public interest awakened throughout the United States anent the social evil in connection with the application of the Mann Act to the white-slave traffic, the authorized investigations in New York and Chicago into the extent and ravages of prostitution, and the very recent abolishment of segregated vice districts in Milwaukee, Detroit, Minneapolis, Los Angeles, Atlanta and Kansas City, and its proposed abolishment in St. Louis, and the passage of the "injunction and abatement law" in Iowa and other states are facts bearing on social welfare and health that are closely related to the medical profession and should deeply interest all reputable practitioners.

Social vice and disease are so intimately associated and the latter so invariably follows the former, that it can be safely asserted that practically every practicing physician has daily contact with venereal disease or its sequelae.

Recognized authority as well as our own experience and observation demonstrate the truth of such statistics as the following: That 80 per cent. of the male population between 18 and 30 years of age either possess or have had an attack of gonorrhea, with a possible sterility following; that 10 per cent. of men after marriage infect their wives from a previously acquired but uncured urethritis; that 10 per cent. of men after wedlock acquire a gonorrhea and then infect their wives; that 70 per cent. of these derive it from prostitutes. It is common knowledge that 20 to 40 per cent. of all blindness is due to gonorrheal infection; that from 40 to 60 per cent. of abdominal and pelvic operations on women are due to the ravages of the diplococcus of Neisser; that probably 18 per cent. of the population of the United States is syphilized; that every case of paresis and probably all cases of locomotor ataxia are due to the *Spirocheta pallida*; and that 25 per cent. of the insane population are suffering from the historic black plague.

Do we realize the enormity of the fact that in a city like Chicago \$15,000,000 are annually burned at the illicit shrine of Venus, and that Kansas City's citizenship each year prostitute to their baser passions \$2,000,000? Have not we, without bringing into question the moral side of this problem, sufficient evidence to demonstrate

a part that we, the medical profession, should take in lessening the awful economic waste and the frightful spread of venereal contagion?

The recent act of the Wisconsin legislature in reference to the control of venereal disease, and the suggestion of Dr. Edwin Martin at the recent session of the Pennsylvania State Medical Society that a state law be passed requiring physicians to report to the board of health all cases of gonorrhea and syphilis coming under their observation, are evidences of a tendency showing that the state and the medical profession are beginning to deal with this great social problem in a practical way.

Surely conditions in Missouri, especially in St. Louis, Kansas City, St. Joseph and Joplin, are such that we in the medical profession must arise to our duty and assume our share of the work toward the solution of this the greatest problem in vice in all history.

Let the profession stir itself and by the time another state meeting is held have matters in hand, to the point that some decided action be taken toward controlling and limiting venereal disease and prostitution in Missouri.

KEEP UP THE STANDARD

Now comes the eclectic and homeopathic medical schools of Kansas City asking for recognition of their graduates by the State Board of Health, and the State Board of Health has held committee meetings in Kansas City to consider the matter.

It is difficult to understand why any board should consider the opening of more medical schools in Missouri. The standard of medical education is so high now that the only proper place in which to conduct the teaching of it is in the great endowed universities and our state institutions.

The public is vitally concerned in the proper education of the physicians who administer to the sick, and have placed laws on the statute books of most states which call for a better educated doctor than any proprietary schools can graduate. A great many physicians of Kansas City who had stock in proprietary colleges have voluntarily given it up in order that the institutions may be closed and medicine be taught where it should be. We do not hesitate to pay tribute to their wisdom and sacrifice, for it was a financial loss to the men of Kansas City who gave up their institutions; they closed them that the higher ideals of the profession of medicine might be placed even higher.

It is to be hoped that the present State Board of Health will maintain the high standard toward which former boards of health have been working for years.

THE NEW MORGUE FOR ST. LOUIS

St. Louis is to have a new mortuary. Where the money is coming from; where the building is to be placed; what it is going to cost; what its style of architecture will be we do not know, and we do not care. But we know we are going to have it. Why?

Because of two reasons: first, the citizens of St. Louis as a community are beginning to take an interest in the welfare of their city. The same expression of culture and of civilization that makes for a symphony orchestra and a free art museum and a public Christmas tree will see to it eventually that proper respect and care are given the dead.

And second: because now, at the right time, St. Louis has the right man for coroner. Dr. L. R. Padberg is the type of man who gets things done. In the short time that he has been coroner he has been on the job. Now he is going after that new morgue. Quietly, month by month, he has been improving little things and finding out ways and means for meeting the big things. And now he has centered on a demand for a new morgue and come before the people and asked for it, and he is going to get it. He does not know how—yet. But he is going to find out. He has his teeth sunk into the trousers of every city official that counts and there is not a man in the City Hall who is not in danger of being picked up and whirled down to that dirty old corner of the jail, which holds every tradition associated with the word morgue, and made to stand and see just what would happen to him, or to you or to me, if we were picked up dead on the streets of St. Louis to-morrow. And just so Dr. Padberg will go after the business man and the professional man and the man in the street until the people—as epitomized in that splendid Christmas editorial in one of the St. Louis morning papers—and say, “this is one of the tasks just the appropriate size for all of us”; and as St. Louis will at some future time build an opera house and make a “city beautiful” for the living, so will they build at once a dignified and adequate and scientifically equipped structure for the care of their unfortunate and accidental dead.

The old morgue has served one purpose, however, that must not be forgotten in its passing. It once saved a man from suicide.

One day a very good-looking, well-dressed German came into the office of the old morgue and approaching the morgue-keeper said: “Would you mind showing me over the place?”

“Certainly not,” the morgue-keeper replied, and they started to look around.

The visitor saw the slabs for the dead, with the oak planks black with the blood of a generation of St. Louis’ unfortunates. He saw the cold, isolated ice-box in the yard where the

“floaters” are stacked; and finally he was shown the little post-mortem room, with its grewsome table standing in the middle of the floor. After surveying it carefully, the stranger turned to the morgue-keeper and said: “So, if I go out and drink my carbolic this is where they will fetch me?”

“Yes,” said the morgue-keeper.

“And they will lay me on that slab and take off my clothes and then shove me into that dirty hole?”

“Yes.”

“And then they’ll finally take me into this tiny, ill-lighted, stinking room, for the doctors to make their final examination and cut me up?”

“Yes.”

The visitor reached into his hip-pocket, pulled out a small vial and handed it to the morgue-keeper. “Here,” he said, “keep this; I’m not going to use it. I’d rather live than have to come to this place.”

STATE DUES FOR 1914 ARE \$3 PER MEMBER

A few members have forgotten the announcement that the state dues had been raised from \$2 to \$3, so we take this opportunity to repeat the information, and we trust there will be no further misunderstanding on this point. There are still some members who have not paid their 1913 dues. We urge these delinquent members to remove this deficiency at once, as it is necessary for all members to pay dues every year in order to maintain good standing and secure the benefit of the defense fund, subscription to *THE JOURNAL*, Fellowship in the American Medical Association and insertion of their names in capital letters in the Directory of the A. M. A.

It is well that the dues were raised, for the defense benefit alone has taxed the treasury to a far greater extent than in any previous year and the expenses are still increasing. The cases are more numerous than formerly, because the members have come to realize that the defense committee renders a protective service that could not be offered through any other means. Attorneys fees are not as modest as in former years—whether due to the high cost of living we will not hazard a guess—and the volume of correspondence and, therefore, clerical hire, are correspondingly greater. In every other department the work of the Association has taxed the facilities at the headquarters, but we are glad to say the members are responding with enthusiastic support to the activities which the Association has undertaken in extending the influence of the profession among the people and raising the standard of practice, as well as drawing the line of demarcation between reputable practitioners and quacks and charlatans.

The outlook for the coming year is most encouraging for a wider and deeper influence of the county societies and the State Association in the education of the people, not only in preventive medicine, but for their protection against quacks and charlatans and an enlarged idea of the real community value of the ethical practitioner and the organized profession.

LUKE, THE GREEK PHYSICIAN

As announced in the November issue of THE JOURNAL, the publication of a study of the character and work of Luke, the Greek Physician, is begun in this number.

In connection with the discussion of such a subject there is naturally room for differences of opinion on many points, and, if these are fairly expressed, truth is usually the gainer from such interchanges; for it may be said with confidence that no physician can know too much about the earlier worthies in medicine, and of whom the Hippocratic schools furnished many illustrious examples. It is therefore hoped that this contribution will lead to a better general understanding of professional aims and conditions in what was an era of intellectual ferment and momentous psychologic change.

As the studies embodied in these papers covered several years of intermittent investigation, the subject developed itself gradually, and it may be that doubts or questions that may early suggest themselves to those interested will perhaps find fair explanation in a later paper. At any rate, it is hoped that the entire series will have been read before controversial points are raised and presented for consideration and debate.

OBITUARY

J. H. P. BAKER, M.D.

Dr. J. H. P. Baker, Salisbury, graduate of the Rush Medical College, 1868, died at his home, December 20, after a protracted illness, aged 76 years. He was a member of the Charitan County Medical Society and the Missouri State Medical Association. The following resolutions were adopted by the Masonic lodge:

Again the silver cord is loosened, the golden bowl broken and the will of God accomplished.

Dec. 20, 1913, Brother J. H. P. Baker received the summons from our Grand Master, laid down the working tools of life and answered the call.

For many years the majority of us have known him socially, religiously, professionally and Masonically. In his social life none were more congenial; in his religious life, none were more zealous; in his professional life, none were more earnest and devoted and in his Masonic life none were more faithful.

He was true to every trust imposed in him and lived for the good he might do.

THEN BE IT RESOLVED, That in the death of Brother Baker the lodge has lost a true and faithful brother; the family a kind and indulgent husband and father and the community, a noble citizen.

RESOLVED, That we extend to his family our deepest sympathy, and mingle our sorrows at parting, with theirs, his near and dear relation, and commend them to Him who doeth all things well.

J. F. WELCH,
J. D. BRUMMALL,
G. W. HAWKINS,
S. F. TRAMMELL,
Committee.

ABRAHAM IRALSON, M.D.

Dr. Abraham Iralson, a member of the Medical Society of City Hospital Alumni (St. Louis), died on Aug. 5, 1913. He was born in Texas, his mother dying soon after his birth. His youth was not a very happy one, and he commenced to shift for himself after his fifteenth year. His first position was that of bell boy in one of the St. Louis hotels, and soon afterward he attracted the attention of the late Pat Short, who made him an usher at the Olympic Theater and later gave him an opportunity to study medicine. Dr. Iralson graduated in 1900 from the Barnes Medical College, served one year at the female hospital and then located in the Clifton Heights district of St. Louis, where his sunny disposition, ready sympathy and medical ability soon won a large practice for him. He was passionately fond of music and philosophy and studied those subjects industriously when not engaged in medical pursuits. He was not married.

Early in life Dr. Iralson developed a mitral stenosis, of which he was fully aware, and which handicapped him greatly in his career, although he never allowed it to interfere with his duties to his patients. He died of heart failure in his thirty-eighth year, universally beloved by his patients and friends, all of whom deemed it a great privilege to have known such a beautiful character. He was a member also of the St. Louis Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

JOHN GREEN, M.D.

IN MEMORIAM

In the death of Dr. John Green, which occurred Dec. 7, 1913, the medical profession lost one of its most pronounced characters and one of its strongest factors for creating and maintaining high educational and ethical standards.

Dr. Green was born in Worcester, Mass., April 2, 1835. By the atmosphere in which his youth was spent, and by heredity, he was especially prepared for the practice of the healing art, his father having been a druggist, so that he early

became familiar with medicines and chemicals, and his generation being the fourth in which there was a Dr. John Green.

With such antecedents, with such opportunities, with his capacity for the acquisition of exact knowledge, and with an interest in the natural sciences and mathematics which made their pursuit his pastime, the natural, logical result was that he should give his life to the practice of medicine.

By his efforts as a student he acquired the degrees of Bachelor of Arts, Master of Arts, Doctor of Medicine, and later, in recognition of his learning and ability, the distinction of Doctor of Laws was conferred on him, and he was made Professor of Ophthalmology in the St. Louis Medical College and afterward in Washington University.

At first he engaged in the general practice of medicine but later, having properly qualified himself, he took up the specialties of ophthalmology and otology.

It was the writer's good fortune to know him from his coming to St. Louis as a young man in 1866 to the end of his life, and to have known him intimately most of that time.

Many of you who read this knew him personally, had listened to his lectures and reckoned him among your friends. Many of you recollect his perspicuity as an instructor, his accuracy as a diagnostician and his skill as an operator. It is not necessary to remind you of these.

He possessed extensive knowledge on many subjects, not only in medicine and the other sciences, but in art and literature; and whatever knowledge he possessed was characterized by accuracy. I remember in one of his addresses he urged the value of acquiring knowledge of one new fact each day. It seems as if he had done this himself.

While he was a man to be admired and respected for these qualities, yet, to me, as I came intimately in contact with him in his daily life, he had other and far more valuable, more unusual qualities; qualities which placed him higher as a man than did his knowledge, and which will be an inspiration to those who knew of them as long as they remember Dr. Green. I knew of his sacrificing his time and strength, and antagonizing a powerful coterie of those who had been his friends and making them his life-long enemies by defending a modest member of the medical profession, not his special friend, who was attacked by powerful men who seemed about to crowd him to the wall. Dr. Green not only defended him but defeated his enemies. At another time an attempt was made to blackmail a young professional man, and Dr. Green made it his own personal concern to defeat it.

Loyalty was a word which Dr. Green dwelt on with emphasis and which he illustrated by his own life.

He drew the line clearly and distinctly between right and wrong, and having done so there was no compromise. One could always know where Dr. Green stood.

When he came to St. Louis, at least one much-respected general practitioner spoke of an oculist as a "miserable specialist." Entering such an atmosphere he stood then for what is now accepted as the best in medical education and practice. He always maintained such ideals and was one of the strongest forces in giving Washington University its high ideals in medical education.

As I look back over the life of Dr. Green, the characteristics for which I respect him most and by which he has helped others most, are his high ideals; his effort to know what was right, and having satisfied himself, to give it his unswerving support; his loyalty to his friends; and above all his uncompromising moral courage.

The memory of his life should be an incentive and an encouragement to every man who would do great things for the community in which he lives.

M. H. Post.

NEWS NOTES

THE meeting of the Western Surgical Association held in St. Louis December 29 and 30, was one of the most successful of its history. About sixty-five members attended. The membership is limited to 100 and there is a large waiting-list. The officers for 1914 are: Dr. B. F. Davis, Omaha, president; Dr. Leonard Freeman, Omaha, first vice-president; Dr. A. W. Littig, Denver, second vice-president; Dr. Arthur T. Mann, Minneapolis, secretary-treasurer; Dr. Jabez N. Jackson, Kansas City, was elected one of the members of the executive committee.

EIGHT milk dealers of Kansas City were fined recently for selling substandard milk. Nine other dairymen were warned by the president of the hospital board and given another chance. In letting them off the president of the health board said: "We are going to give you one more chance, but this is your last. The next one of you caught violating the ordinance in any way will lose his permit and be forced out of business. And we are going to watch you a little closer than we have before. If you cannot furnish good clean milk to your customers, Kansas City is no place for you."

A MEDICAL student was fined in the municipal court at Kansas City recently for performing vivisection on a cat without the presence of a teacher. In commenting on the sentence, the *Kansas City Times* says: "Vivisection, when conducted by scientists, is conducted as humanely as

possible. And no more of it is done by scientists than is necessary for their necessary work. But vivisection practiced crudely, and with no other result than the torture of animals, is hateful in itself and it arouses resentment against the scientific uses of vivisection." With all of which representative medical men are in full accord.

At the meeting of the Kansas City Retail Druggists' Association at the Coates House on Tuesday, Dec. 16, 1913, a resolution was passed endorsing and commending the decision of the police commissioners of Kansas City in their efforts to stamp out the illegal sale of intoxicating liquor in drug stores. Attention is called to the attitude of this association as expressed in their June, 1913, meeting, when, on motion of Mr. W. M. Federmann, an instructed committee visited the new chief of police and urged the desirability of curtailing the sale of "booze" in drug stores. This has had good effect and much is expected from the announced attitude of the commissioners. The secretary was instructed to forward a copy of the resolution to the police board of Kansas City and also to Governor Major.

SINCE December 1 the following articles have been accepted for inclusion with New and Non-official Remedies:

Elarson, Elarson Tablets (The Bayer Company, Inc.).

Sterile Ampoules of Mercury Salicylate; Salvarsan—"606"—Ehrlich, Suspension in Ampoules; Neosalvarsan, Ehrlich, Suspension in Ampoules (Hynson, Westcott & Co.).

Sodium Acid Phosphate (Mallinckrodt Chemical Works).

Emetine Hydrochloride Ampoules (Parke, Davis & Co.).

Sodium Acid Phosphate (Powers-Weightman-Rosegarten Co.).

Radium Chloride; Radium Sulphate (Radium Chemical Co.).

Change of title:

The manufacturer having changed the name Essence of Pepsin, Fairchild to Pepsencia, the Council directed that the corresponding change of title be made in New and Nonofficial Remedies (Fairchild Bros. & Foster).

Articles omitted from N. N. R.:

Having been withdrawn from the market, the Council voted that Glycerole Trypsin, Armour, be omitted from New and Nonofficial Remedies (Armour & Co.).

Having voted not to accept papain for inclusion with New and Nonofficial Remedies, the Council voted to omit the Aromatic Cordial, P. M. & Co., from the appendix to New and Nonofficial Remedies (Pitman-Myers Co.).

MEMBERSHIP CHANGES IN DECEMBER

NEW MEMBERS

Cobb, Walter F., Cape Girardeau.
Barry, James J., 5896 Delmar, St. Louis.
Hourn, George E., 2338 Holly, St. Louis.
Larimore, Joseph W., Washington University Hospital, St. Louis.
Neinstedt, Elam J., Jackson.
Rutherford, Orra L., 5817 Gravois, St. Louis.
Payne, Richard Johnson, 4125 W. Belle, St. Louis.

CHANGES OF ADDRESS

Blaylock, Geo. A., Silver Lake to Perryville, Mo.
Blaylock, R. D., Oak Ridge to Pocahontas, Mo.
Benage, John L., Ibera to Lebanon, Mo.
Brown, W. D., Newtonia to Carthage, Mo.
Beatie, W. R., Marshfield to 837 North Blvd., Springfield, Mo.
Catheart, C. P., 1112 E. Forty-Fourth St., to 3212 Wayne Ave., Kansas City, Mo.
Clark, Chas. F., 3838 Olive to 2451 Walrond, Kansas City, Mo.
Craig, Arthur D., Linmar Bldg., to Wall Bldg., St. Louis, Mo.
Davis, Wm. D., 3199 S. Grand Ave., to 3621 Junita St., St. Louis, Mo.
Dorsett, Walter B., Linmar Bldg., to Wall Bldg., St. Louis, Mo.
Emmons, F. H., Hatton to Auxvasse, Mo.
Fischer, Amos T., Maryville to St. Joseph, Mo.
Froncke, Martin G., 2819 Wisconsin Ave., St. Louis, to 7105 Broadway, Albuquerque, New Mexico.
Gehring Eugene C., 15 E. Forty-Eighth St., New York to 3857 Westminster, St. Louis, Mo.
Gorin, M. George, Linmar Bldg., to Wall Bldg., St. Louis, Mo.
Gray, A. D., New Cambria to Hurdland, Mo.
Harrell, H. J., Bogard to 824 N. Jefferson St., Springfield, Mo.
Hynes, Jos. C., Brookfield to Pierce City, Mo.
Jamison, Elizabeth, 2512 Bernays, St. Louis, to Loma Linda, R. D., Redlands, Cal.
Kramolowsky, H. H., 520 Whittier to 620 Cleveland Ave., St. Louis, Mo.
Lee, Herbert, Bank of Commerce Bldg., to 101 W. Missouri Ave., St. Joseph, Mo.
Long, Frank L., Doe Run to Farmington, Mo.
Meador, Aulph A., Ironton to Belleview, Mo.
Moore, Harry M., Linmar Bldg., to Wall Bldg., St. Louis, Mo.
Morris, Roger S., St. Louis to Clifton Springs, N. Y.
Myers, E. Lee, 2624 Louisiana to 3904 Laclede Ave., St. Louis, Mo.
O'Brien, L. F., Sappington, Mo., to 5401 Gravois, St. Louis, Mo.
Prewitt, Geo. E., Hawk Point to Wellsville, Mo.
Price, J. T., Norborne to Mt. Moriah, Mo.
Rice, E. L., Pilot Grove, Mo., to Marianna, Ark.
Scott, Elijah A., 1700a S. Broadway to Eighteenth and Victor, St. Louis, Mo.
Shields, Wm. B., Linmar Bldg., to Wall Bldg., St. Louis, Mo.
Slaughter, T. H., Quincy, Ill., to Humbolt, Ariz.
Taylor, Thos. W., St. Louis, Mo., to Birmingham, Ala.
Vandover, Saml. T., 903 Morrison Ave., to 3728 Arsenal St., St. Louis, Mo.
Vandivert, A. H., St. Joseph to Bethany, Mo.
Vonderau, Otto L., 2306 S. Thirteenth St., to 2855 S. Jefferson St., St. Louis, Mo.
Walker, W. J., 402 Argyle Bldg., Kansas City, Mo., to Osage City, Kans.
Wilson, C. S., Kirksville, Mo., to Gentry, Ark.

DEATHS

Baker, James H. P., Salisbury, Mo.
Crawford, M. E., Camden, Mo.
Durham, U. S., Cairo, Mo.
Losey, George C., Almon, Mo.

MISCELLANY

"MISSOURI OPTOMETRIST ARRESTED"

THE TRUTH ABOUT WYETT

Below we reproduce statements that appeared in one of the trade journals of the optometrists when W. E. Wyett was arrested and charged with practicing medicine without a license at Springfield. As stated on another page, Wyett acknowledged his guilt after a chiropractor was convicted on similar evidence, and the case was dropped on Wyett's promise to leave the state and never attempt to practice in Missouri in the future. With their usual aptitude for accuracy, there are a number of false statements in the article, namely: The State Medical Association did not aid Greene County Society in any manner; that body of energetic citizens conducted the entire prosecution unaided and paid the fee of Mr. T. J. Delaney, the attorney who assisted the prosecuting attorney; the secretary of the State Medical Association did not have charge of the case nor did any of our members appear to give testimony, other than resident physicians of Springfield.

The article from the opticians' journal follows:

"W. E. Wyett, a Springfield optometrist, has been arrested at the instigation of the Missouri Medical Association. On March 8 Mr. Wyett was charged with violation of the medical practice act, on complaint of the Greene County Medical Society. His bond was fixed in the sum of \$300 and he is now out awaiting trial, which is to be held early in April.

"Following, as this does, rumors from various sources, that the medical profession is planning to attack the optometrists in order to intimidate them so that they will make no further attempts for an optometry law, this prosecution of Wyett has great significance.

"The secretary of the State Medical Association is in charge of this case and will have the assistance of special attorneys to push the prosecution. The optometrists are alive to the danger with which they are beset and are rallying to the support of Mr. Wyett, determined to defend him to the last ditch, if necessary.

"A decision favorable to the medical association in this case would be used with great effect in the persecution of optometrists throughout the state, and it is in recognition of this fact that both sides are preparing to carry this contest to final conclusions.

"The president of the Missouri Association of Optometrists has arranged to have the association represented when the trial is called, in addition to the local representatives who will look

after Wyett's interests. He says: 'We have clearly satisfied ourselves that this man has not violated the medical practice act by practicing medicine, and in view of the favorable court decisions obtained in similar cases in other states within the past few years, we have no fear of being able to clear Mr. Wyett of the charges against him, and we expect the members of the association to stand by us in this, the first case, as no one knows when his turn may come.'

"The following letter has been sent by Oliver Abel, secretary of the Missouri Association of Optometrists, to members throughout the state:

ST. LOUIS, Mo., MARCH 29, 1912.

Dear Sir—On February 23, W. E. Wyett, a practicing optometrist of Springfield, Mo., published an advertisement explaining that frequently headache and nervousness are directly traceable to eye-strain, and may be relieved on the application of proper lenses.

Mr. Wyett has been in Springfield only three weeks.

On March 8 the Greene County Medical Association caused his arrest for practicing medicine without a license, using the advertisement as the **SOLE** and **ONLY** cause for the complaint. Mr. Wyett has never suggested or prescribed medicine nor any other treatment for the eyes but glasses; nor has he prescribed medicine or treatment for any other ailment whatsoever.

For several years a number of optometrists at Springfield have been using the same statements and stronger ones in their advertisements. Why have they not been arrested? Why was Mr. Wyett singled out for the **TEST CASE**?

Because by singling out a newcomer who had not yet established himself in practice they seek to get a decision affecting every optometrist in the state.

A well-established optometrist would have too many cases to bring into court against them.

That this is to be a test case is shown by the fact that the **SECRETARY OF THE STATE MEDICAL ASSOCIATION** will have charge of it, and special attorneys have been employed to prosecute.

This, therefore, is not a Wyett case, nor the case of any individual, but the issue is: Shall the optometrists of this state be denied the practice of their profession by an adverse decision. If Wyett is convicted it places the practice of optometry entirely in the hands of the medical practitioners. Will you stand for this—doesn't your fighting blood boil?

Every optometrist in the state has as much at stake as Wyett in the outcome of this trial. The Medical Trust has singled out the weakest link to break the entire chain.

We are now engaged in a contest to determine whether or not optometry is to exist in this state and whether the fitting of glasses is to be monopolized by the medical people. This contest is an expensive one. Employing, as we must, the best legal talent, your financial support is imperatively necessary. In the future, when the fight for optometry shall have been won, you will be proud to see your name among the supporters and defenders of our cause.

Send your remittance for the defense fund at once to the secretary. Send at least \$1, and as much more as you possibly can. **WE MUST WIN** this case at all hazards. No time to spare; the case comes up April 8.

Sincerely yours,

MISSOURI ASSOCIATION OF OPTOMETRISTS,
OLIVER ABEL,
Secretary and Treasurer.

This is the advertisement that Wyatt had inserted in the newspapers in Springfield. Read it through; it is indicative of what may be expected of optometrists if they obtain legal recognition as practitioners of optometry:

After Wyatt had left Springfield the following appeared in another optical journal:

A case against W. A. Wyatt, [Wyatt] Springfield, Ill., [Mo.] charged with violating the medical practice act by advertising to cure nervous diseases of the eye

and to testify for Wyatt, but the case was continued to November. Before it was again called for trial it was dismissed. If the case had gone to trial the expert oculists would have testified that the ailments alluded to in the advertisement could be cured by correctly fitted glasses.

[We are not informed what happened to Wyatt's "health." He evidently lost his "nerve"; or was his "nerve current" overtaxed? If so, why not apply glasses? But we believe the trial

Read This!

Do you distinguish between the genuine and the imitation? If you were going to buy a diamond and the dealer would offer you the genuine or imitation stone at the same price which would you choose? If some organ in your body was not working up to its normal capacity would you choose to have the power by which that organ is operated made normal and stop the trouble or would you have the organ weakened by laceration or removed by operation and assume the risk of other dangers which attend operations? Have you or any of the family been told that you need an operation for some "chronic" or other alleged malignant disorder such as piles, female troubles, kidney trouble, cross-eyes, glaucoma etc., etc.? Do you know that the majority of these conditions are some of them exclusively are caused by an excessive strain on the nervous system?

If your comfort and pleasure are being disturbed by your being made a victim of indigestion, constipation, headache, sick-headache, dysmenorrhoea, menorrhagia, epilepsy, St. Vitus dance, a feeling of exhaustion when you do a little work and a tired feeling when you get up of a morning, etc., or any kind of eye trouble you cannot afford to not come and let me analyze your case.

The nervous system is the energy producing function of the entire body. Not a muscle is moved nor an act accomplished except by the application of nerve force. Under normal conditions enough of this force is generated to supply the machinery of the body and cause it to do its work properly, but if an extra amount is demanded as in the case of defective eyes—the eyes being the only organs in the body that can demand and receive this extra amount—the nerve current is increased, nerve strain is produced and trouble follows. In the course of time the body fails to supply this excessive demand because the producing faculties have become overworked, consequently, the body becomes susceptible to any of the ills the flesh is heir to.

Further information will be cheerfully given you if you will call at my office. And don't let anybody but a competent Ophthalmologist work on your eyes. They are too delicate to experiment on and permanent injury not only to the eyes, but to other functionaries of the body can so easily be inflicted by practitioners who don't know their business. I don't diagnose, I analyze cases, theoretically, practically and mathematically. No guess work. Ask any of my patients. Come and investigate. My system is so different.

Dr. W. E. Wyatt, Oph. D.

Eye and Nerve Specialist.

222 East Commercial Street.

Glasses furnished Consultation free. Office hours 9-12 a. m., 1-4 p. m. Saturday evenings 7-9.

[sic] by the fitting of glasses, has been dismissed, and Wyatt has left Springfield and gone to Arizona for his health. The case was instituted by the Greene County Medical Society. The Missouri Association of Optometrists took up the cudgels in his defense. The case was set for September. Oliver Abel, president [secretary], of the Missouri Association of Optometrists; Dr. William Runde, and Dr. C. Harvey Altheide, oculists, went to Springfield to take part in the case

case contains no lens for correcting the deformity known as "black eye." At any rate, Missouri is not a "healthy" place for Wyatt and his kind.

The "expert oculists" referred to in the above article are licensed physicians living in St. Louis, but they are not members of our Association.—Ed.]

BANQUET TO DR. D. R. PORTER

November 24 seventy-five physicians of Kansas City, friends of Dr. D. R. Porter, tendered him a banquet at the University Club. The occasion was his seventy-fifth birthday and fifty years of active practice, forty-eight of which were in Kansas City. He was a lecturer and teacher in the Kansas City Medical College for many years and was loved by all its students. His achievements in medicine were second to none, and during his whole professional career he has shown by precept and example his intimate knowledge of all those traits that make for the ethical physician and kindly courteous gentleman.

In the long list of teachers and lecturers of the old Kansas City Medical College no man gave to it a more unselfish and productive service than did he. He had on all occasions the confidence and esteem of his students and the Faculty, and in no instance did he fail to do justice, whatever his personal relations may have been.

His capacity for clear thinking had the assistance of a cool head and a steady hand, and no emergency could arise to find him unprepared. The honors bestowed on him are evidence of the esteem in which he was held by the entire medical profession.

Dr. J. F. Binnie was toastmaster, and in his jolly Scotch way enthused a spirit of humor and diversion that yielded a desire to hear him oftener.

Dr. E. W. Schaufler was first called on, and spoke of Dr. Porter as a friend and physician.

Dr. J. D. Griffith spoke of his active work and considered him a man of science and of cultured taste.

Dr. R. T. Sloan next spoke of Dr. Porter as a teacher and of his kindness to young men.

Dr. H. O. Hannawalt spoke of Dr. Porter as a teacher and of his kindly consideration of his associates.

Dr. R. M. Schaufler spoke of Dr. Porter as a friend, as did likewise Dr. Holbrook and Dr. Logan Clendenen.

Dr. Porter made an address full of feeling and good will to those who came to greet him, and seemed the happiest man at the banquet.

Dr. Porter's tireless industry, his wise judgment and his superior mental qualities have endeared him to all who know him.

In appreciation of Dr. Porter's service to medicine, no more representative assembly of old and intimate friends, all of them knowing him professionally and with kindness, could have been assembled. Good cheer prevailed throughout the evening, and the guests departed, glad that they had honored Dr. Porter and glad of having been in attendance, for in honoring him they honored themselves.

J. D. G.

IN THE CITY'S INTEREST

The hospital and health board yesterday returned the right answer to the politicians who have been urging the board to let the garbage contract to the high bidder. The board, by unanimous vote, gave the work to the low bidder and took his bond for the faithful performance of the contract.

A proper and simple proceeding every business man will say, but some of the politicians are very much offended and feel that their business has been attacked. That also is a proper and natural view from their standpoint. The business of Kansas City and the business of such politicians are opposite and opposing interests and no public official can serve them both. The health board is to be commended for attending to Kansas City's business instead of to that of the politicians.—*Kansas City Star*.

A PUBLIC DUTY

At the recent meeting held in Philadelphia called to discuss methods for checking the use of habit-forming drugs, a physician declared that it would be of benefit to the world if the manufacture of morphin, cocain and similar drugs were prohibited. The harm done in the sickroom he thought would be more than offset by the good done elsewhere.

When one thinks of the infinity of suffering which morphin has relieved this statement stands out with striking force. It may not be true, but whether entirely true or not it argues strongly for thorough, even drastic, action looking to the control of the manufacture and distribution of all such substances.

In the control of the liquor traffic which society undertook long ago, a great body of honest opinion against repressive measures had to be met and overcome. There is no such body of opinion against the control of habit-forming drugs. All of the reputable producers of such drugs agree that they should never be administered except on the order of a physician. The opinion of the scoundrels who have vended them disguised as cures and remedies, and made large fortunes in doing so, carries no weight with anybody. Nevertheless, manufacturing pharmacists continue to produce morphin and cocain in quantities which they must know to be in excess of any legitimate demand. They cannot trace their product to the consumer, and must either go out of the business or continue to feed the appetites of an army of drug fiends.

It is clearly the duty of society as a whole to take up this problem and devise means by which the whole business of making and distributing habit-forming drugs shall be under government control or supervision so that the production shall be limited to the needs of the country and

such drugs shall not get into the hands of the general public. The problem involved is simply how to take control and make it efficient. There need be no campaign for the reform of public opinion.—*St. Louis Republic*.

INVITE HEALTH BY PURE AIR

VENTILATE

Impure Air Has Killed Thousands.
Open the Windows and let in Pure Air.
Pure Air is the Best Medicine for All.

That sign, in red and black, issued by the city health commissioner, is to point the way to health at all lodging houses, and remind the roomer that there is life in fresh air.

The board of health had two thousand of these cards printed at first, but it increased the order at once, and it is estimated that fully three thousand of them will be tacked up in a conspicuous place in each room in the lodging and rooming houses.—*Kansas City Star*.

SOLD PLASTERS TO CURE TUBERCULOSIS

G. Adams, who has gained local fame by plasters which he is said to have sold and guaranteed to cure tuberculosis, no longer lives in the city, according to the state officers, and when last heard of by them was said to be en route to Colorado, where there is also much tuberculosis.

A warrant for the arrest of Adams was issued Saturday night. Prosecuting Attorney S. W. Bates filed information against him, the charge being practicing medicine without a license. Complaint was made to Mr. Bates by representatives of the Jasper County Anti-Tuberculosis Society, following an investigation made by Miss Lenore Sieber, the visiting nurse.

Adams is said to have had a thriving business in plasters. They sold for \$2 each and produced such agony that the victim of the white plague forgot about his lungs and thought only of his back.

It was when Adams is said to have guaranteed a cure for a man at Duenweg if \$50 was paid him that his arrest was decided upon. The money was deposited in a bank, and is yet there, it is understood. The man who was to have been cured wore the plasters until he became so weakened from the pain that his relatives made him realize the fake of the "cure."

Local officers believe that Adams learned of the warrant which had been issued for his arrest and that he departed shortly after obtaining the information.—*Joplin Herald*.

[NOTE.—We hope the prosecuting attorney will take similar measures to drive out other equally dangerous quacks that infest Jasper County.—Ed.]

SOCIETY PROCEEDINGS

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville December 11, with the following members present: E. M. Griffith, first vice-president; H. S. Crawford, secretary; T. W. Adair, M. P. Overholser, R. D. Ramey and J. S. Triplett.

The scientific program was short owing to the fact that some members who were on the program were absent. Dr. E. M. Griffith reported a very interesting case of peri-gastric adhesions. It was an interesting case to the members and all took an active part in the discussion.

Dr. R. D. Ramey also reported a case of interest and the various members made a diagnosis from the symptoms related.

The secretary-treasurer made a report for the past year. Briefly stated, it showed the number of members in the society to be 33; non-members, 13; number of physicians in county, 45. Balance of cash on hand Dec. 1. \$37.61.

Several communications were read and action taken as follows: Committeeman on health and public instruction, M. P. Overholser; local Red Cross committee, E. M. Griffith, H. S. Crawford, H. Jerard, S. W. Fair and R. D. Ramey.

The society decided to hold a public meeting on the date of the next regular meeting Feb. 12, 1914. This meeting will be in accordance with the rules of the speakers' bureau of the American Medical Association and a speaker from this bureau will be requested. Dr. J. S. Triplett was appointed chairman of a local committee on arrangements from the various city clubs and organizations.

The election of officers for 1914 resulted as follows: E. M. Griffith, president; M. P. Overholser, first vice-president; T. W. Adair, second vice-president; H. S. Crawford, secretary-treasurer; H. Jerard, member board of censors; T. W. Adair, delegate; M. P. Overholser, alternate. The newly elected president appointed the following committees: Committee on public health and legislation, H. S. Crawford, J. S. Triplett and R. D. Ramey; committee on tuberculosis, M. P. Overholser, H. S. Crawford, T. W. Adair, F. B. Ellis, S. W. Fair, H. Jerard and W. F. Chaffin.

H. S. CRAWFORD, M.D., Secretary.

CLARK COUNTY MEDICAL SOCIETY

At a meeting of the Clark County Medical Association, duly held in the city of Kahoka, Clark county, Missouri, on the afternoon of Friday, Oct. 31, 1913, the following resolutions were adopted:

Whereas, Dr. Ambrose W. Teel is about to take his departure from this county to seek other professional fields, and

Whereas, He has been for many years a faithful and honorable member of this association and of the profession, and

Whereas, He has been recognized as a gentleman of finest character; of splendid professional standing; of genial and companionable ways; has been a professor in the Keokuk Medical College of Keokuk, Iowa, a former president and secretary of this association; a member of the Missouri General Assembly, where he acquitted himself honorably and efficiently. Therefore be it

Resolved, That this association, duly in session, give to Dr. Teel its unqualified endorsement, as affecting any place, location or position for which he may apply.

All of which is respectfully submitted to whomsoever this may be presented.

J. R. BRIDGES, Secretary.

CLINTON COUNTY MEDICAL SOCIETY

The annual meeting of the Clinton County Medical Society was held in Lathrop, Thursday evening, December 4. This being the meeting for the election of officers the following were elected: President, Dr. John T. Kimsey, Lathrop; vice-president, Dr. P. H. Stockfleth, Cameron; secretary, Dr. C. M. McConkey, Lathrop.

The following program was rendered: "System in Diagnosing and Treating Disease," by Dr. W. T. Lindley, Hamilton; "The Doctor in the Community," by Dr. P. H. Stockfleth, Cameron; "Irregularities of the Heart," illustrated with stereopticon slides, by Dr. C. C. Conover, Kansas City. The papers were excellent and the entertainment by local profession characteristic of the Lathrop doctors—always first-class. The following were present: Drs. J. C. Starks, Gower; C. H. Risley, Cameron; M. L. Peters, Cameron; P. H. Stockfleth, Cameron; J. T. Kimsey, Lathrop; C. M. McConkey, Lathrop; John Sturgis, Perrin; C. C. Conover, Kansas City; W. T. Lindley, Hamilton; F. H. Fulton, Plattsburg.

FRANK FULTON, M.D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the new Opera House in Bland, Dec. 18, 1913. Two sessions were held and the following were present: Drs. Frederick Aufderheide, Marion E. Spurgeon, John D. Seba, C. A. Bunge, J. W. Burgess, C. T. Leach, W. E. Johnson, John J. Rademacher, W. R. Ferrell, John J. Ferrell, C. E. Legg, J. E. Jose; visitors: Drs. William Engelbach, St. Louis; I. M. Owens, Leslie; H. G. Isenberg, Vancleave; W. E. Seba of Leedeey, Okla., and Dr. Fitzgerald of Gerald, Mo.

The program was carried out as follows: Dr. J. E. Jose read a paper on "The Management of Cases." Dr. J. W. Burgess read a paper on "Dropsy." Dr. C. T. Leach read a paper on "Inertia." Dr. John D. Seba, "Articular Rheumatism." All these papers were liberally discussed.

Dr. Engelbach delivered a lecture on "Disease of the Heart," and also made a demonstration of blood-pressure with two different kinds of sphygmomanometers. After the meeting the doctors all banqueted at the Commercial Hotel. There was a night session open to the public. The principal speaker at this public session was Dr. William Engelbach of St. Louis. He spoke on the prevention and cure of tuberculosis, cancer, and the social evil. The remarks on the social evil were especially appropriate, since this question was never discussed in public at this place before. In this connection the doctor advocated the enactment of a eugenic law, a law that compels candidates for matrimony to furnish a clean bill of health from a competent physician before a marriage license can be issued. He asked this question "Mothers, do you want daughters married to men who will infect them with a disease that will require your daughter to undergo an operation within a few years in order to save her life?"

Dr. Aufderheide was reelected president, Dr. John D. Seba was reelected secretary and treasurer, and Dr. M. E. Spurgeon was reelected vice-president. The next meeting will be at Owensville, last Thursday in April, 1914.

JOHN D. SEBA, M.D., Secretary.

HARRISON COUNTY MEDICAL SOCIETY

The Harrison County Medical Society met in Bethany on Tuesday, Dec. 16, 1913, the following members present: C. H. Robertson, Eagleville; F. H. Broyles, Bethany; L. R. Webb, Bethany; visitors: A. H. Vandivert, Bethany; J. A. Magraw, Gilman; E. H. Bryson, Bethany; W. Worth Vandivert, Bethany.

On motion Dr. J. A. Magraw and Dr. W. Worth Vandivert were elected members of the society, and Drs. A. H. Vandivert and E. H. Bryson for reinstatement. Doctor Vandivert has been living in St. Joseph until recently, and was a member of Buchanan County Society, and Dr. Bryson was away at the time for the last payment of dues.

The president appointed Drs. A. H. Vandivert, Webb and Broyles as a committee for a program for the next meeting.

On motion Dr. W. Worth Vandivert was elected secretary of the society to fill Dr. O. A. Schmid's unexpired term.

Dr. L. R. Webb read a very able and well-prepared paper on "Acute Dilatation of the Stomach from the Standpoint of the General Practice." Paper discussed by Dr. A. H. Vandivert.

The following members have paid their dues for the next year: F. H. Broyles, E. H. Bryson, A. H. Vandivert, W. Worth Vandivert, L. R. Webb, C. H. Robertson, J. H. Morroway.

The society then adjourned to meet in February at some date set by the president.

W. WORTH VANDIVERT, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society held its regular monthly meeting in Clinton, Dec. 17, 1913, with the following members present: Drs. Walton and Jennings of Windsor; Smith of Osceola; Fewel of Montrose; Dice of Lowry City; Landaker of Collins; and Drs. Barr and Shankland of Clinton.

An excellent paper on "Infection with Colon Bacillus" was read by Dr. J. H. Walton, and a very interesting and instructive discussion followed.

The annual election of officers was held with the following result: President, S. A. Poague; vice-president, J. H. Walton; secretary and treasurer, W. M. Shankland; censor, C. L. Landaker.

MACON COUNTY MEDICAL SOCIETY

The Macon County Medical Society held another fine clinic Tuesday, Dec. 16, 1913. Dr. Joseph Grindon of St. Louis held a splendid clinic for us when he examined and discussed about twenty cases of skin diseases, embracing some rare cases. Among these were a very extensive papillomatous syphilide involving the left side of face and neck, back of neck, and extending down on the thorax, one continuous mass of skin destruction; a case of dermatitis herpetiformis (universal) lasting eighteen years; a very extensive psoriasis; a number of epitheliomata, from the mildest rodent ulcer type to the more malignant forms; two cases of lupus; and many cases of a milder nature. Dr. Grindon also demonstrated his manner of using the freezing method in the removal of superficial growths, in some half dozen applications. Dr. Grindon exhibited a familiarity with the material at hand that proved him a student and keen observer; his lucid, concise and forceful presentation of pathologic conditions and diagnostic facts left a deep impression on the physicians in attendance and we hope the great interest they manifested pleased Dr. Grindon. The clinic was a great success and we are sure, aside from the knowledge gained, that the physicians present will have a greatly increased interest in skin diseases.

The one distinctive feature of our clinic is that we see the clinician dig the case out right before our eyes. We get his technic and diagnostic methods better than we would in a clinic in the hospitals. The stimulus to study is no small feature. We certainly are delighted with our clinics.

There were twenty-five physicians present, and but for the adverse condition of the weather there would have been more.

A. B. MILLER, M.D., Secretary.

PULASKI COUNTY MEDICAL SOCIETY

The Pulaski County Medical Society held its fourth quarterly meeting Dec. 17, 1913, at the City Hall, Richland, at 3 p. m.

Two new members were received into membership, leaving but one physician in the county who is not a member of the County Society. Cases were reported and discussed and some patients presented and discussed.

The election of officers for 1914 resulted as follows: L. Tice, Waynesville, president; R. E. Howlett, Hawkins, vice-president; E. A. Oliver, Richland, secretary-treasurer; J. E. Rayl, Crocker, censor; H. C. Murphy, Richland, delegate; L. E. Rolens, Dixon, alternate.

In the evening Dr. W. B. Dorsett of St. Louis delivered his very interesting and instructive lecture on "Some Carriers of Disease." This lecture was delivered in the city hall which was full to its seating capacity, about 250. The public is very enthusiastic as to the great value of such lectures.

A banquet was held at the Hotel White after the lecture and all had an enjoyable time at the end of a pleasant and profitable day. The next meeting will be held at Waynesville the Wednesday of court week in March.

EVERETT A. OLIVER, M.D., Secretary.

RAY COUNTY MEDICAL SOCIETY

The Ray County Medical Society held its regular meeting in the circuit court room in Richmond, Wednesday, Dec. 17, at 2 p. m. The meeting was called to order by the president, Dr. R. Sevier, and the minutes of the last meeting were read and approved.

Roll call of members and officers as follows: Drs. R. Sevier, C. B. Shotwell, L. D. Greene, J. M. Buchanan, J. W. Smith, J. E. Ball of Richmond, and Dr. T. B. Cook of Rayville.

Officers for the ensuing year were elected as follows: President, R. Sevier; vice-president, T. B. Cook; treasurer, L. D. Greene; secretary, J. E. Ball. County committeeman on health and public instruction, Dr. C. B. Shotwell.

A very interesting paper was read by Dr. C. B. Shotwell on "The Primary Dressing of Wounds," which was freely discussed by all the members present. The society then adjourned to meet again at the court house in Richmond on the third Wednesday in February.

J. E. BALL, M. D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at Lancaster, Dec. 18, 1913, in the office of Drs. Potter & Potter. The meeting was called to order by Dr. B. B. Potter, president. Members present: Drs. B. B. Potter, W. A. Potter, W. F. Justice, E. L. Mitchel of Lancaster, W. H. Zieber of Queen City, J. H. Keller of Glenwood, A. J. Drake and J. B. Bridges of Downing.

A communication was read from Dr. Harriet H. Stevens, chairman of the State Committee on Public Health and Instruction, asking that a committeeman be appointed from this county. On motion Dr. W. A. Potter was appointed to serve in that capacity.

Papers were read by Dr. W. H. Zieber on "The Treatment of Pain by Vibration"; Dr. W. A. Potter on "Mammary Abscess," and Dr. J. B. Bridges on "Erysipelas." All these papers were interesting and were discussed at length.

The officers elected for 1914 are: President, Dr. W. H. Zieber; vice-president, Dr. W. A. Potter; secretary-treasurer, Dr. J. B. Bridges; delegate to state meeting, Dr. J. H. Keller; alternate, Dr. A. J. Drake.

The next meeting will be held at Lancaster, at the office of Dr. W. F. Justice, April 21, 1914.

J. B. BRIDGES, M.D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its annual meeting Dec. 9, 1913, the president, Dr. Rutledge, in the chair. Officers for the ensuing year were elected as follows: C. Moore, president; F. E. Hinch, vice-president; R. W. Lanning, secretary-treasurer; F. E. Hinch, delegate; board of censors, Drs. Rutledge, Wilkins and Lanning. The president appointed as committee on public health and legislation, Drs. Hinch, Wilkins and Lanning. Dr. G. M. Rutledge was appointed to serve as county committeeman on health and public instruction. The treasurer's report was read and approved.

All business having been transacted the society adjourned until the second Wednesday in January, 1914.

R. W. LANNING, M.D., Secretary.

VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in regular session at Nevada on Thursday, December 11.

Dr. F. W. Bailey of St. Louis operated for appendicitis during the morning. In the afternoon the society met at the court house. Those present were Drs. Petty, Wilson, Yates, Williams, Hornback, Dulin, Craig, Brown, Robinson and others of Nevada. Dr. Walker of Harwood, and Dr. Davis of Walker were also present.

After the reading of the minutes the society was highly entertained with a paper on "Goiter" by Dr. Bailey of St. Louis. This paper was very thorough and was freely discussed by Dr. H. Unterberg, of St. Louis and others.

Dr. Howard Hill of Kansas City lectured on "Gall-Stones Their Cause and Effect." This lecture was illustrated with diagrams, was very entertaining as well as instructive and was freely discussed by Drs. Bailey, Unterberg and others of the society.

At this meeting the following officers were elected for 1914: Dr. E. A. Dulin, president; Dr. C. B. Davis, vice-president; Dr. J. T. Hornback, secretary; Dr. G. S. Walker, censor. Dr. G. W. Petty was elected a delegate to the meeting of the State Medical Association, and Dr. C. B. Davis alternate.

After adjournment the members met at one of our leading cafés where they enjoyed a splendid banquet.

J. T. HORNBACK, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

RELIABLE MEDICINES

Since publication of New and Non-Official Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-Official Remedies":

DIGIPOTEN.—Digipoten consists of the digitalis glucosides in soluble form, diluted with milk sugar to give it a strength equal to that of digitalis of good quality. Digipoten is adjusted by the frog and guinea-pig methods to have a strength of 1,400 heart tonic units and by chemical assay to contain from 0.3 to 0.4 per cent. digitoxin. The action, uses and dosage of digipoten are the same as those of digitalis. It is sold in the form of a powder, which is soluble in water, and as Digipoten Tablets, each containing 0.03 gm. The Abbott Alkaloidal Co., Chicago, Ill. (*Jour. A. M. A.*, Dec. 6, 1913, p. 2069).

TANNIGEN TABLETS.—Each tablet contains tannigen (see N. N. R., 1913) 0.5 gm. The Bayer Co., New York City (*Jour. Dec. 6, 1913, p. 2069*).

BORDET-GENGOU BACILLUS VACCINE FOR WHOOPING-COUGH PROPHYLAXIS.—Greeley Laboratories, Inc., New York.

BORDET-GENGOU BACILLUS VACCINE FOR WHOOPING-COUGH THERAPY.—This vaccine is believed to be of service in the prevention and also in the treatment of whooping-cough. Greeley Laboratories, Inc., New York City (*Jour. A. M. A.*, Dec. 13, 1913, p. 2158).

CULTURE OF BACILLUS BULGARICUS, FAIRCHILD.—A liquid culture of the *Bacillus Bulgaricus*. The culture is sold in packages containing six and thirty vials, respectively. The culture is used internally in the treatment of intestinal putrefactive diseases and as an application to body cavities in the treatment of suppurative conditions. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, Dec. 13, 1913, p. 2158).

SLEE'S ANTIMENINGITIS SERUM.—For description of Antimeningococcus Serum see *N. N. R.*, 1913, p. 215. The Abbott Alkaloidal Co., Chicago.

SLEE'S ANTISTREPTOCOCCIC SERUM.—For description of Antistreptococcus Serum see *N. N. R.*, 1913, p. 216. The Abbott Alkaloidal Co., Chicago (*Jour. A. M. A.*, Dec. 20, 1913, p. 2242).

REFORM IN MEDICINES

PULMONOL.—Pulmonol is a consumption "cure" put out by the Pulmonol Chemical Co., New York. As always in the case of consumption "cures," the testimonials issued may be divided into two classes, those who really had tuberculosis and those who did not have it. Investigation of some of the testimonials given some time ago, generally show that those who relied on the nostrum are dead while those who got well, never had tuberculosis. Examination in the A. M. A. Chemical Laboratory indicated that each fluidounce of Pulmonol was approximately equivalent to 29 gr. of potassium guaiacol sulphonate, 10 gr. of sodium benzoate and 1/24 gr. of strychnin sulphate (*Jour. A. M. A.*, Nov. 29, 1913, p. 1998).

LACTIC ACID FERMENT PREPARATIONS IN N. N. R.—Assertions that the lactic ferment preparations on the market are worthless caused the Council on Pharmacy and Chemistry to examine those admitted to *N. N. R.* While past examinations showed this class of preparations to be most unreliable, the present market supply was found to be satisfactory. The products examined were Fairchild Culture of *Bacillus Bulgaricus*, lactic bacillary tablets, Fairchild; lactampoules, Fairchild; bacillary milk, Fairchild; bulgara tablets, H. W. Co.; massolin, Schieffelin (*Jour. A. M. A.*, Dec. 6, 1913, p. 2084).

SANATOGEN.—The fundamental objection to Sanatogen is not its outrageously high price, but the attempt to ascribe to a mixture of casein and glycerophosphate powers not possessed by these ingredients. The claim that Sanatogen is a "nerve food" is an absurdity as is any claim that the casein in Sanatogen has a greater food value than the casein in ordinary milk. Physicians who have given fulsome puffs for Sanatogen are invited to study the claims which are made for it—the following being one ". . . it revivifies the nerves, promoting sleep and helping digestion . . ." (*Jour. A. M. A.*, Dec. 6, 1913, p. 2085).

THE VALUE OF ECHINACEA.—While most extravagant claims are made for the drug, the Council on Pharmacy and Chemistry concludes that, on the basis of the available evidence, echinacea is not entitled to be described in New and Non-Official Remedies as a drug of probable value (*Jour. A. M. A.*, Dec. 6, 1913, p. 2088).

TEXAS GUINAN.—The Texas Guinan World-Famed Treatment for Corpulency (Texas Guinan Co., Los Angeles, Cal.) appears to be the latest venture of W. C. Cunningham, of Marjorie Hamilton's Obesity Cure fame. It is exploited by follow-up letters giving the experiences of Texas Guinan, an actress, and offering the preparation at a sliding scale of prices, ranging from twenty down to three dollars. From an analysis made in the A. M. A. Chemical Laboratory it appears that an essentially similar preparation may be obtained by mixing one pound of powdered alum with ten ounces of alcohol and enough water to make one quart. A second specimen which was examined in the association's laboratory contained no alum or alcohol and appeared to be a tragacanth preparation of the "vanishing lotion" type (*Jour. A. M. A.*, Dec. 13, 1913, p. 2173).

COLLOIDAL PALLADIUM.—A preparation of colloidal palladium, under the proprietary name Leptynol, is proposed as a means of causing the absorption of adipose tissue. The preparation appears one of the many thousand proprietaries produced abroad in the past year and put on the market after meager experimental work (*Jour. A. M. A.*, Dec. 13, 1913, p. 2179).

DOWD'S PHOSPHATOMETER.—According to its inventor this is a device "for taking the phosphatic index or pulse of the nervous system." Its originator, Dr. J. Henry Dowd, M.D., Buffalo, N. Y., writes enthusiastically of his instrument and of "Comp. Phosphorus Tonic." The phosphatometer is a scientific absurdity which pretends to determine the amount of phosphate in the urine and thus to measure "nerve metabolism" (*Jour. A. M. A.*, Dec. 20, 1913, p. 2258).

ANOTHER "CANCER CURE."—Denver newspapers advertise that the International Skin and Cancer Institute of Denver claims to have a cure for cancer. The "cure" is exploited by one John D. Alkire. No doubt those afflicted with cancer, and those who believe themselves afflicted with cancer, will flock to Denver for the "cure." The actual victims of the disease will of course die, but there will be the usual number of recoveries from non-malignant sores that will be heralded as "cures" and thus will make the venture a profitable one. To the honor of Denver it may be said that some of its newspapers refused the advertisement (*Jour. A. M. A.*, Dec. 20, 1913, p. 2248).

THE READY RECKONER.—The attempt of a proprietary exploiter to pose as the physician's postgraduate instructor comes from the promoter of a "blood-stimulating" preparation—Hemaboloids Arseniated (with Strychnia). It is in the form of a ready reckoner for the diagnosis of pathologic sputum. The thing consists of a revolving arrow, surrounded by circles containing illustrations of bacteria such as no human eye ever saw through a microscope. The physician apparently is expected to point the arrow to what he sees, or thinks he sees, in the microscope and then, through a window in the tail of the arrow, observe the name of the organism and the disease which it produces. The device is an insult to intelligent physicians and belongs in the waste-basket (*Jour. A. M. A.*, Dec. 27, 1913, p. 2506).

PA-PAY-ANS (BELL).—An analysis, included with the report of the Council on Pharmacy and Chemistry rejecting the product, failed to find one of the constituents claimed to be present in the preparation—the constituent after which the medicine appears to have been named, namely papain (*Jour. A. M. A.*, Dec. 27, 1913, p. 2314).

BOOK REVIEWS

PROGRESSIVE MEDICINE.—A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by Hobart Amory Hare, M.D.

This is the closing volume for 1913, containing 400 pages with index. It is one of the most interesting volumes of the 1913 series, and contains articles on: Diseases of the digestive tract and allied organs—the liver, pancreas and peritoneum; diseases of the kidneys; genito-urinary diseases; surgery of the extremities, shock, anesthesia, infections, fractures and dislocations, and tumors. Practical therapeutic referendium.

A TEXT-BOOK OF BIOLOGY. FOR STUDENTS IN MEDICAL, TECHNICAL AND GENERAL COURSES.—By William Martin Smallwood, Ph. D. (Harvard), Professor of Comparative Anatomy in the Liberal Arts College of Syracuse University, and in charge of Forest Zoology in the New York State College of Forestry at Syracuse. Octavo, 285 pages; illustrated with 243 engravings and thirteen plates, in colors and monochrome. Cloth, \$2.75, net. Lea & Febiger, publishers, Philadelphia and New York, 1913.

This biology is intended for both student and practitioner. The contents of the volume are so well laid out and so interestingly presented that the veteran as well as the cadet in medicine will find it worth his while to 'hide a wee' with this book. The most modern ideas are incorporated in the work, and the text is divided into convenient paragraphs, each paragraph having its own lead, while an intelligent index makes the book still more accessible.

PATHOLOGY, GENERAL AND SPECIAL.—A manual for students and practitioners. By John Stenhouse, M.A., B.Sc. (Edin.) M.B. (Tor.), formerly demonstrator of Pathology, University of Toronto, Toronto, Canada. Second edition, revised and enlarged; including selected list of State Board Examination Questions. 12mo, 278 pages, illustrated. Cloth, \$1.00, net. Lea & Febiger, publishers, Philadelphia and New York, 1913.

This is a most useful little volume. A sort of a high tower from which student and practitioner alike can view the pathological landscape o'er. The book is now in its second edition and is as comprehensive as so concise a work can be.

THE HUMAN BODY AND ITS ENEMIES.—A text-book of physiology, hygiene and sanitation. By Carl Hartman, B.A., M.A., and Lewis Bradley Bibb, B.A., M.D. Two hundred and forty-seven illustrations; 355 pages. World Book Co., Yonkers-on-Hudson, New York, 1913.

This little volume has been designated for use in the lower grades of schools and lays special emphasis on the fundamentals of personal hygiene. The imagination of the young scholar will take hold of the facts that are marshalled here in quaint simplicity; the volume is a remarkable advance over the majority of text-books of this kind, and should have a place in every school library.

MASSAGE—ITS PRINCIPLES AND TECHNIC.—By Max Bohm, M.D., of Berlin, Germany. Edited with an introduction by Charles F. Painter, M.D., professor of orthopedic surgery at Tuft's Medical School, Boston. Octavo of ninety-one pages, with ninety-seven illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth; \$1.75, net.

Dr. Painter who has edited the present edition of the work feels that the profession on this side of the sea is losing something by not going in more for physical therapeutics. It is for the purpose of enlisting a

broader interest in the subject on the part of the physicians in America that the American edition is presented. The volume, illustrated as it is, is exceedingly interesting although there are many of us who have not the faith in physical therapeutics that is professed of Dr. Painter. The work is especially recommended for the use of nurses and those who are following medical gymnastics in physical culture schools.

FIRST BOOK OF HEALTH.—A first book of personal hygiene for pupils in the lower grades. By Carl Hartman, B.A., M.A., and Lewis Bradley Bibb, B.A., M.D. One hundred and twenty-two illustrations; 155 pages. World Book Co., Yonkers-on-Hudson, New York, 1913.

A real health primer containing the first principles of hygiene adapted to school children of the lower grades. The text is simple and direct and the illustrations chosen are such as are calculated to impress the juvenile imagination. This book is away far and above the best thing of its kind that we remember to have ever seen.

APPLIED BACTERIOLOGY FOR NURSES.—By Charles F. Bolduan, M.D., assistant to the general medical officer, department of health, city of New York, and Marie Grund, M.D., bacteriologist, department of health, city of New York. 12mo of 166 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth; \$1.25, net.

In this little book the direct application of bacteriology to nursing receives strongest emphasis to the exclusion of the larger portion of general bacteriology. A correct understanding of the more important facts and fundamentals of the science is a sine qua non for the modern nurse, and the volume before us is a successful presentation of the essentials in a form that is concise and brief enough to meet the precise purpose for which it is intended.

MALARIA, ETIOLOGY, PATHOLOGY, DIAGNOSIS, PROPHYLAXIS AND TREATMENT.—By Graham E. Hensou, M.D. Twenty-seven illustrations; 178 pages. C. V. Mosby Co., St. Louis, 1913. \$2.50.

Malaria is just now receiving special attention from the medical profession and others. While hookworm disease and yellow fever are waning, malaria is in no appreciable degree abating and the appearance of this volume at this time, by one whose experience and research in the disease has covered many years, is a matter for congratulation. The book goes very thoroughly into diagnosis, treatment and prophylaxis and the general practitioner will find the book exceedingly interesting, and in some measure a surprise.

A CLINICAL MANUAL OF MENTAL DISEASES.—By Francis X. Dercum, M.D., Ph.D., professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Octavo of 425 pages. Philadelphia and London: W. B. Saunders Company, 1913. Cloth; \$3, net.

It is easy to see that Dr. Dercum has written his book out of his own exceptionally rich experience in mental diseases, for it everywhere bears the stamp of originality. Those who know Dr. Dercum personally will at once recognize the familiar definiteness of opinion and clarity of expression. One is not in doubt about what he means; he is not ambiguous.

This work, written for student and practitioners, will serve a very useful purpose for it is eminently practical, giving clear descriptions in understandable language and precise advice as to what is to be done. Dr. Dercum has rendered American psychiatry a useful service in presenting a book which a practitioner can read and having read can understand. Psychiatry has been the stepchild in the family of medical specialties, misunderstood and neglected. In time it will come, by such efforts as Dr. Dercum's, to have its rightful place in the family circle.

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ORIGINAL ARTICLES

THE SEMICIRCULAR CANALS AND THE FUNCTION OF EQUILIBRIUM*

GEORGE E. SHAMBAUGH, M.D.
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The semicircular canals have two well recognized and more or less distinct functions. From these canals we get our sense of turning motions, but in addition the semicircular canals undoubtedly play a very important part in preserving the equilibrium of the body. This it accomplishes through what we designate as tonus impulses, which supply the skeletal muscles and keep them in a constant state of stimulation. To Ewald is due the credit of demonstrating the tonus function of the labyrinth. Various hypotheses have been advanced to account for such tonus impulses. Ewald, for example, believed that the hairs of the hair-cells of the cristae project free in the endolymph and that they are in a constant state of ciliary motion, which in turn results in constant stimulation of the hair-cells and the production of a constant stream of tonus impulses to the various skeletal muscles. This hypothesis of Ewald was, of course, based on a faulty conception regarding the structure of the end-organ in the semicircular canal. The hairs do not project freely in the endolymph but are covered over by a superimposed structure called the cupula.

Breuer was a student of the anatomy of the labyrinth and understood the relation between cupula and hair-cells. Breuer believed that the tonus impulses emanate from the hair-cells of the cristae. His idea of the stimulation of the hair-cells was that this stimulation resulted from displacement of the cupula on the crista, as the result of impaction of endolymph currents. In order, therefore, to account for the existence of constant tonus impulses, Breuer was forced to assume the existence of constant currents of endo-

lymph. He seemed to have an idea that these endolymph currents could be accounted for from the constant replenishing of endolymph. He believed that the endolymph flowed from the membranous labyrinth directly into spaces containing cerebrospinal fluid. Of course we know now that there is no communication between the endolymph and the brain cavity and there seems to be no reason for supposing that constant endolymph currents exist.

Barany believed that tonus impulses to the skeletal muscles are derived from tonus centers located in the region of Deiter's nucleus. Two such centers exist; one stimulating the muscles producing motion toward one side, the other stimulating the muscles producing motion toward the opposite side. Now the tonus of these centers is, according to Barany, in part automatic, but in part is kept up from a constant stream of tonus impulses passing to these centers from the vestibular ganglion, located in the meatus acusticus internus. The tonus of this ganglion is in turn kept up by impulses emanating from the hair-cells of the cristae. What keeps up the constant stimulation of the hair-cells to supply this tonus Barany does not suggest.

My own conception of the origin of labyrinth tonus is that these impulses emanate from the hair-cells of the cristae and that they are the result of a constant stimulation. Now the normal stimulation of the hair-cells of the cristae is brought about by the impaction of endolymph currents against the cupula, resulting in an interaction between the cupula and the hairs of the hair-cells. I am inclined to believe that this is kept up in the labyrinth by the pulsations associated with each beat of the heart. With each pulsation there must be a rise and fall of intralabyrinthine pressure. There are several openings leading from the labyrinth: the aqueductus cochleae, the aqueductus vestibuli, the oval and the round windows. With each increase and decrease of intra-labyrinthine pressure there must result a slight to and fro motion of the endolymph, which would be sufficient to keep up a constant

* Read at joint meeting of Chicago Laryngological and Otological Society and Section on Oto-Laryngology of St. Louis Medical Society, Nov. 29, 1913.

stimulation of the hair-cells on both sides of each crista.

The clinical phenomena which result from a unilateral disturbance of labyrinth tonus are; first, an increase in tonus from the affected labyrinth, producing nystagmus toward the same side; second, a complete suppression of tonus in the affected labyrinth, resulting in a nystagmus toward the opposite side; third, an intracranial irritation, producing nystagmus again toward the affected side.

In order to understand these phenomena resulting from disturbance of the labyrinth tonus, it is necessary that one keeps distinctly in mind a few fundamental facts regarding the physiology of these canals: First, the impulses from each canal stimulate only those muscles the movements of which lie in the plane of this canal. Second, a motion of endolymph in one direction in a canal stimulates only those hair-cells on the side of the crista receiving the impact. In order to stimulate the hair-cells on the opposite side of the crista, an endolymph current in the opposite direction is necessary. Third, an endolymph current in one direction in the canal stimulates the muscles which produce movement toward one side; an endolymph current in the opposite direction stimulates the muscles which produce motion in the opposite direction. Take, for example, the muscles controlling the movement of the eyes: an endolymph current in the horizontal canal, from the canal toward the vestibule, stimulates the muscles which produce nystagmus toward the same side, and an endolymph current from the vestibule toward the canal stimulates the muscles which produce nystagmus in the opposite direction. Fourth, it has been demonstrated by Ewald that a greater stimulation results from an endolymph current in one direction in a semicircular canal than in the opposite. For example, in the horizontal canal a greater stimulation results from a movement of the endolymph in the canal toward the vestibule, while in the superior and posterior canals the greater reaction results from an endolymph current from the vestibule toward the canals. Fifth, in all three of the semicircular canals the greater response is obtained from those endolymph currents which stimulate the muscles producing nystagmus toward the same side.

From each semicircular canal, therefore, emanate impulses producing nystagmus in either direction; the stronger impulses always being those which produce nystagmus toward the same side. With these facts in mind one can readily understand why the first symptoms that arise from an extension of an inflammatory process into the labyrinth produce nystagmus toward the same side. The first pathological change is a congestion. This congestion increases the intralabyrinth pulsation on that side. This increases the tonus from the hair-cells on each side of the

several cristae. The stronger impulses emanating from the hair-cells which produce nystagmus toward the same side overbalance the normal tonus impulses from the healthy opposite ear. In the same way one can explain why a complete suppression of tonus impulses from one labyrinth produces nystagmus in the opposite direction, because the tonus from a normal labyrinth stimulates more forcibly those muscles producing nystagmus toward the same side. Supposing now that a labyrinth has been completely destroyed and an extension of inflammation takes place, irritating intracranially the vestibular nerve, the result would be exactly the same as a stimulation of the end-organs in the labyrinth; that is, an increase in the tonus producing a nystagmus toward the same side.

With this conception of the physiology of the semicircular canals, we have a very simple and plausible explanation for the clinical phenomena observed in applying the rotation test in cases where one labyrinth has been destroyed. In these cases we observe that the duration of the after-nystagmus toward the normal ear is much longer than the after-nystagmus toward the affected side; the reason for this being that when the patient is rotated toward the affected side, on stopping rotation the inertia of the endolymph in the horizontal canal of the normal ear stimulates the hair-cells on the canal side of the crista. This, as we have seen, is the more sensitive side of this crista and is the side which when stimulated produces nystagmus toward the same side. On the other hand, if the patient is rotated toward the normal side, on stopping rotation the inertia of the endolymph produces an impaction on the vestibular side of the crista in the horizontal canal of the normal ear: in other words, a stimulation of the group of hair-cells which, when stimulated, produces nystagmus toward the opposite side. This side of the crista being much less sensitive than the canal side, the after-nystagmus toward the affected side is much shorter.

With Barany's hypothesis of tonus centers, the following explanation for these phenomena in the rotation experiment has been offered. The impulses from the semicircular canals on one side influence only the tonus center which produces nystagmus toward the same side. According to this hypothesis it is assumed that an endolymph current in one direction in the canal stimulates this tonus center, while an endolymph current in the opposite direction in this same canal depresses this center. In the horizontal canal, for example, an endolymph current from the canal towards the vestibule stimulates the tonus center which produces nystagmus toward the same side, whereas, an endolymph current from the vestibule toward the canal depresses this tonus center.

In a unilateral destruction of the labyrinth, in order to get any after-nystagmus toward the affected side when applying the rotation experi-

ment, it is necessary to assume that the tonus of this hypothetical center must continue to act indefinitely after its labyrinth has been destroyed. This does not appear to be probable. When the end-organs in a labyrinth have been destroyed, one would expect that the tonus of the center for this labyrinth would also die out.

Let us suppose that the right labyrinth has been destroyed. If the patient is now rotated toward the left, on stopping rotation there will be an impact of endolymph in the left labyrinth, on the vestibular side of the crista in the horizontal canal. The impulses from this side of the crista pass to the tonus center which produces nystagmus toward the left. These impulses being inhibitory depress the tonus of this center. But on stopping rotation in this experiment we get an after nystagmus toward the affected side. This can only be explained by the continued action of the tonus center on the opposite side.

122 South Michigan Avenue.

A SHORT STUDY IN THE ETIOLOGY OF NASAL HYDRORRHEA, WITH CASE REPORTS*

HARRY KAHN, M.D.,
CHICAGO

Hydrorrhea nasalis is one of the dark chapters of rhinology. It is a subject usually dismissed with a few words or a paragraph by the text-book writers. Parker says: "The etiology is very doubtful, but generally occurs in neurotic individuals, and is itself closely allied to paroxysmal rhinorrhea; indeed, it is often difficult to draw a sharp line of distinction between the two complaints." Phillips, in his book, published in 1911, is satisfied with this statement: "The exact nature of this affection is not well known, but probably several conditions, mostly neuroses, are causative factors." Gradle's text-book does not mention this phenomenon. Ballenger makes mention of it in a short chapter. Except Bosworth, who, in 1889, first called attention to this affection, and recorded eighteen cases (of these all but three are, in the light of our present knowledge, probably sinus diseases), the English writers make little mention of it. The later German text-books, notably Chairi and Zarniko, pay more attention to the subject.

Chairi, in his "Die Krankheiten der Nase" (1902) page 37, relates a case that appears to have been a cerebrospinal rhinorrhea and not a pure hydrorrhea nasi, the limits of which we will consider later.

Zarniko¹ goes into the subject more thoroughly than any of the text-book authors.

This question has, up to recent times, been merely a speculative one, and all authors agree that the disease is caused by a nervous disturbance causing, as Grayson says, a lack of balance between the arterial and venous circulations.

There are two types of this affection that present in part the same symptoms, but whose anatomic pathological basis is entirely different. These are: (a) The cerebrospinal type, and (b) the nasal type.

In the former there is a definite anatomic loss of continuity in the skull, a hiatus is formed, through which the fluid pours into the nasal cavity. In the latter, pure nasal type, which may vary from the paroxysmal rhinitis to the almost painless, non-irritated variety, with only an abnormal volume of watery discharge from the mucous lining of the nose. Between these extremes lie the vast number of intermediate cases, all of which are due to some change in the mucous membrane.

On the examination of case records and searching the literature, one is struck by the fact that this is a disease of adult life or late youth. According to my experience, there has been a preponderance of females, although St. Clair Thompson thinks that males and females are affected alike.

Birkett² enumerates the following predisposing factors, viz.:

1. A neurotic temperament, implying susceptibility.
2. A local morbid condition of the nasal mucous membrane, which may or may not be associated with gross pathological structures.
3. An irritant acting without or within.

Now, as to the active factors in the case. Following the lead of Bresgen,³ who struck the first note of our modern conception of the pathology, that this disease is a sympathetic nerve affection, we must first consider the work of Max Buch,⁴ who has shown by animal experiment that the sympathetic fibers are not sensitive in health, but if they are rendered hyperemic, or if the animal experimented on is teased or tormented, the fibers become very sensitive. Bidder and Volkmann⁵ found that the nerves distributed to the mucous membrane of the nose contain five to twenty times as many more sympathetic fibers as the cerebrospinal, and that the preponderance

2. British Medical Journal, 1910, ii, 1708.

3. Nasenleiden und Sympatheticus: Beitr. z. Anat., Physiol., Pathol. u. Therap. d. Obres, der Nase und des Halses, iii, 125.

4. Die Sensibilitätsverhältnisse des Sympathicus und Vagus mit besonderer Berücksichtigung ihrer Schmerzempfindlichkeit im Bereich der Bauchhöhle, Arch. f. Physiologie, 1901, p. 197-221; St. Petersburg Med. Wehnschr., 1901, N. F. xviii, 131 and 141.

5. Die Selbstständigkeit des sympathischen Nervensystems durch anatomische Untersuchungen nachgewiesen, Leipzig, 1842.

* Read at joint meeting of Chicago Laryngological and Otological Society and Section on Oto-Laryngology of St. Louis Medical Society, at St. Louis, Nov. 29, 1913.

1. Die Krankheiten der Nase und des Nasenrachens, 1910, p. 593.

of nerve fibers is most striking in the branches of the fifth nerve distributed to the nose.

The functions of the sympathetic fibers are vasomotor and secretory.⁶ Therefore, reasoning from these premises, one is led to believe that hydrorrhea nasalis is a disturbance of the sympathetic nerve fibers in the nasal mucous membrane, caused by some irritant or by nervous shock similar to a tormented animal, giving rise to a change in the function of the fibers and causing vasodilatation and extravasation of a watery fluid.

I wish now to bring two case histories to your notice, hoping at a future period to bring experimental evidence for your consideration.

CASE 1.—G. M., female, aged 18. Born in Roumania, came to America at the age of 8. Until her thirteenth year attended public school, when her father's growing business required help. The father being unable to read or write, the patient was sent to business college. The college work was difficult for her to master, and required study most of the day and well into the night. On completing the course she entered her father's office, and worked from 8 a. m. until about 10 p. m. It was during the early months of her business career, worried by the responsibilities of her position and reduced in strength by her hard college course, that the nasal attacks appeared. They are characterized by sneezing, discharge from the nose, swelling of the nose, redness of the eyes, and lacrimation, together with a severe headache. Occurrence varies from twice a week to once in three months, and they last about twenty-four hours. The attacks occasionally come on following a change in the weather, inhaling dust, or most frequently some disturbance of mental state, worry, excitement, quarrel, etc.

The attacks are ushered in by sneezing, yawning and a subjective occlusion of the nose. This is followed by a thick yellowish discharge, which later becomes thin and watery. The nose now becomes hyperemic and swollen and smart. Associated with the nasal phenomena the patient's eyes become red and a profuse lacrimation is observed. During the attacks photophobia becomes severe. Frontal headache is, as before stated, a constant symptom. These symptoms last twelve to twenty-four hours, when they gradually disappear. When the attacks occur at frequent intervals they are not as severe as those that come on after longer periods. During the interval between the attacks an examination of the nose and throat is absolutely negative.

Past History.—Has had pneumonia, diphtheria, scarlet fever, measles twice, mumps, operation for appendicitis at the age of 16, and had tonsils removed at 17, in the hope that their removal would influence the nasal condition by removing a possible septic focus.

Inquiry as to the likes and dislikes for food, to rule out a metabolic disturbance, shows that her average diet consists of:

Breakfast: Tea with lemon; an orange or grape fruit; one soft-boiled egg, and white bread.

Dinner (Noon): Meat soup; chicken or meat; potatoes; canned fruit; Seltzer water.

Supper: Cheese; herring and bread.

Her temperature, pulse and respirations are normal—98.6 F., 88, and 24.

6. Zarniko, p. 34: Aschenbrand über den Einfluss bei Nerven auf der Secretion der Nasenschleimbaut. M. F. O., 1885, p. 72.

Blood: Hemoglobin (Sahli), 98 per cent.; 5,072,000 reds; 11,800 whites (neutrophils, 70; small mononuclears, 28; large mononuclears, 1; eosinophils, 1).

Blood-Pressure: Right, 107; left, 110.

Urine negative, even after 90 grams of glucose. Three specimens examined at two-hour intervals. Glucose given at 6 p. m., and urine examined at 6, 8 and 10 a. m. The same result and same intervals after 90 grams of levulose.

Gastric contents after Ewald test meal—on analysis of 100 c.c., which was grayish-brown, 0.2 per cent. free acid, and 41 per cent. acidity, with 0 organic; otherwise negative.

Feces: Acid, dark brown, solid. No mucus or pus. Blood, none microscopically; chemically, trace. Food: Occasional epithelial cell and muscle debris.

CASE 2.—C. F., aged 26, female. The death of the father in May, 1911, caused a change in the mode of life of the family; from ease and comparative luxury, they were thrown upon their own resources, the brunt of it all falling on this girl. Six weeks following this great sorrow, and during a time of great stress, the patient developed what she thought was a coryza, but which has continued with a slight intermission since the time of onset, in 1911. The illness is characterized by a sense of occlusion of the nose and a discharge that is usually thin and watery, but sometimes thick and yellow. On arising in the morning the patient sneezes ten to twelve times, and this phenomenon also occurs when the patient is subjected to excitement. Anosmia is present. The menstrual period is accompanied by increased severity of the symptoms.

Objectively, the turbinates on both sides are pale pink, very much swollen, and more sensitive to the touch than normal. The nose seems filled with a thin mucoid fluid that apparently exudes from all the structures in the cavity. Cocainization and adrenalinization reduces the turbinal swelling to nearly normal, leaving no pendulous hypertrophic areas.

Stein's injection of alcohol, cauterization of the tuberculum septi, washing the antra of Highmore gave negative results. Small doses of saturated solution of potassium iodid, as advised by Pierce, also gave no results. Physical and neurological examinations negative.

The patient sleeps well and is given to outdoor sports. According to her own statement, she says: "I am not of a nervous temperament, not irritable, not easily annoyed, nor given to worrying over little things."

Now, the point of this whole discussion and the cases I have recited are cited in proof of the statement that there is a distinct nervous element in these cases. In the first, the girl was tormented by her work and the realization of her immense responsibility. In the second case the rhinorrhea followed in a short time after the death of a remaining parent, throwing on an erstwhile care-free girl the support and responsibility of a family. One case resulted in a rhinitis vasomotoria and the second in rhinitis edematosa, both of the same class, but of different variety.

I wish, in conclusion, to assert that instead of saying there *may be*, to say that *there is a nervous element* in these cases, and that in all probability this unpleasant disease is caused by a change in the reaction of the sympathetic fibers distributed to the nasal mucous membrane of the nose.

31 North State Street.

LUKE, THE GREEK PHYSICIAN

PART III

HIS PLACE IN MEDICINE WITH REMARKS ON
FAITH-HEALING, REPUTED MEDICAL
MIRACLES AND LIKE PHENOMENA *GEORGE HOMAN, M.D.
ST. LOUIS

On two occasions I have brought before this club certain views touching different phases of the life and work of this Greek physician, whose influence in the double realm of intellect and imagination has, perhaps, seldom been equaled in the records of our race. In one of these papers the evidence brought forward by the authorities to show that Luke was a Greek, and a trained physician, was sketched, and the works of his imagination which have made his name immortal were also mentioned. The second paper dealt with that period in his life when Greek science and Christian faith confronted each other in the arena of his medical mind and conscience, possibly as antagonistic influences, and it would appear were brought into agreement by him on grounds that were entirely natural and rational.

The present attempt will be to show that Luke must be ranked as one of the choicest medical minds known to any age, although this assumed fact has been beclouded by the church in estimating the value of his work as an apostle of the Christian religion. In short, it is felt that the time has come when physicians should take steps to reclaim Luke as one of their own in the name of that profession of which it is believed he was one of the greatest ornaments; for in science, intellect and work he appears to have been graven in the likeness of the best that was produced in the Golden Age of Greece.

The present purpose, therefore, is to deal with the work of Luke's intellect on medical lines in so far as it is possible to trace and separate such results from the influence of related faculties or associated traits, and the difficulties that beset such an undertaking are indeed serious when the known yield of his imagination so much exceeds that which is in evidence touching his medical knowledge and professional skill.

In such a situation it may be permissible to have recourse, to a certain extent, to inferential methods such as are countenanced by scientists engaged in antiquarian research, for example, dead forms of speech or fossil animal remains, the key to the text of lost literature and language being sometimes found which unlocks the secret of their formation and thus enables logical conclusions to be drawn respecting linguistic origins, peculiarities, etc. Or, with respect to extinct animal types unearthed from prehistoric drift,

the expert is often able by means of a bone or tooth to read from it the law of structure and function, and to build in approximate physical proportions animal shapes that may have antedated man's appearance on the earth by hundreds if not thousands of centuries.

If, then, such methods may be sanctioned with respect to past philologic or zoölogic eras, somewhat similar steps may be warranted in the task of bringing to light the facts of medical science and literature that have been buried by the pious loess and ecclesiastical siltings of upwards of two thousand years, for only fragments here and there remain which bespeak the medical side of Luke as shown during his lifetime. An attempt will also be made to trace the law governing the Greek mentality in dealing with medical problems and affairs.

Before entering on these lines of inquiry it may not be amiss to say a few words bearing on the relation of Luke to early Christianity, and his work in shaping and establishing that form of faith. It is well known that through many centuries of training and discipline the Greek intelligence had gained a contour and proportion all its own and recognizable as such to this day—capacity, comprehension, conception, creativeness, culture, courage, clarity, cogency, in harmonious order, were all characteristic of the Greek mind, and to this endowment Luke was born, and to these qualities he became legitimate heir.

The training of Luke in Hippocratic medicine was doubtless thorough and this fact had a vital relation to the work before him in a psychologic sense, as it is hoped will be brought out later on. The anatomist, physiologist, psychologist, in short, the rationalist, would say that the wonderful powers manifested by Luke were due to ancestral influence, prepotencies of mind strengthened from generation to generation, so that in the building of his brain certain cerebral centers, functions and traits were extraordinarily but symmetrically developed, thus giving special fitness and accounting for the works of intellection and imagination which so richly marked his course in life.

Being not disobedient unto his vision, either heavenly or earthly, he used with forceful effect the gifts that were thus naturally his own, and touched the deepest springs of feeling and action giving to the new religion a human appeal, a living power, anchoring it in the consciousness of mankind in a way which the rather boisterous preachings of some of his co-workers, or even all of them, could never have brought about.

It is not unfair, perhaps, to say that of all the apostles of the early church, Luke, by reason of his birth and rearing, was most sanely minded, and of superior intellectual and ethical balance, while his clear vision and deep insight of human nature and motives enabled him to note shortcomings in the scheme of the new faith,

* Read before the St. Louis Medical History Club in 1910.

as declared by others, and which his genius and skill alone were able in part to correct.

There is reason to doubt that the idea of virgin birth and much else implied in the story of Bethlehem was original with Luke, as a much older religion in the still more distant Orient had made the doctrine of divine incarnation a part of its creed and, with the zeal of its many apostles for missionary service, it is possible that Luke well knew this and, recognizing its value, made it a living accessory of the new faith in a flight of imagination the beauty and power of which, perhaps, was never before equaled. Lacking this supreme touch of the Greek physician it would seem as though the Christian religion could have reached a level no higher than Confucianism, a noble plea in behalf of the ethics of human conduct and brotherhood, it is true, but not a religion in the devotional sense and quite unacceptable to the Occidental mind.

The strong Greek common sense, his keen worldly wisdom, his sympathy and sagacity in sensing human needs and cravings, enabled Luke to give to the new faith a going power, something for the primitive instinct of the race to lay hold of, and in that age and existing conditions only the Greek imagination, luminous and lofty, could have given to the borrowed doctrine—if such it was—the noble and appealing form in which it is found in the writings of this great physician, and in his gospel only. Evidence in support of this is found in the fact that the older faith, which Christianity follows in a number of particulars, is still numerically the leading religion of the world and has been so for upwards of twenty-five centuries, deriving its devotional acceptance and popular strength mainly from the features given to Christianity by Luke, whether by adaptation from Buddhism or original conception cannot now be told. He taught, too, in an age of violence and blood, "On earth peace, good will toward men," or, peace on earth to men of good will, but this teaching has been turned into mockery by nations that profess themselves Christian, in which form of hypocrisy our own government has been a wilful sinner. The nativity, as announced by Luke, is heartily celebrated as a yearly holiday by many who do not acknowledge his faith, while the dates of other related events are much less widely observed, and even then in a merely perfunctory way by many Christians.

Luke's place in medicine would naturally be determined by his attitude toward faith-healing and the reputed medical miracles narrated in the Acts and gospels, and on which the new faith leaned as evidence of its divine origin—a posture of weakness rather than strength, as it would be likely to appear to a man of Luke's scientific training and true perception of the laws of mind and matter, notably concerning the psychology

of the crowd, and the emotional responses of the average human being. History tends to show that no form of pious faith, however well-conceived, can be other than a handmaiden to humanity, following and serving but never leading. The ideas that forerun spiritual uplift are born where thought is most free, and this harmonizes with the orderly course of psychology. If this view is correct, that which is quite loosely called a miracle, and which takes the form of capricious interruption of the course of observed natural law, is an impossibility for the reason that in the economy of nature the adaptation of means to ends is perfect, waste of energy is unknown and there exists no demand for such outshowings, the normal working power of the normal human brain sufficing for all known needs.

Anatomy, physiology and psychology teach that, barring disease or injury, the evolution of the human brain proceeds from birth to death, the adult growth being a development of centers or areas controlling or ministering to the higher life, this being true of the race generally. The correctness of this is testified to by experiences of daily life in the ready recognition by us of phenomena in nature that would have been held miraculous not many years ago, as in the form of striking new discoveries and inventions. Herein civilized man has shown himself to be of kin to the child-mind of the aborigine who yet looks on the telegraph, phonograph, telephone, photograph, etc., with superstitious awe as the work of gods or demons.

It is held by physiologists who recognize in the functioning of the normal human brain the only medium of conscious contact between this world and the laws that rule the universe that for every idea or thought conceived the score is there registered in actual cellular change, and this is in accord with what science would teach as, otherwise, memory could not be brought into existence.

A shot piercing the human brain may spare life and yet destroy the loftiest imaginative powers of the mind; another shot, taking another course, may not be fatal, yet annihilate the noblest intellectual faculties of man; while, too, localized disease or senile change may act slowly in the same way, so that herein past all cavil are the proofs that in certain definite cerebral areas reason, religion, intelligence, sentiment, conscience, have their seats and that such centers or areas are dependent for structural integrity and proper working mainly on the quality and quantity of the blood-supply which reaches them; therefore, if miracles are wrought here must be the theater for such manifestations, for here is the human power-house whose dynamos actuate every organ and function.

In my last paper a brief survey was made of the means for medical instruction in ancient Greece, and the demands made of those entering

on such studies. Of these facilities it may again be said:

"That around the Mediterranean seaboard, in all the chief cities under Grecian influence, from the time of Hippocrates to the last days of Luke, the teaching of scientific medicine was making itself felt. It was a common feature in all the . . . schools that they followed the true scientific method of observation, experiment and theory subjected to tests for verification. They sought to establish the reign of law in the relations between bodily and mental ailments and natural causes. Outside these schools everybody believed in supernatural demoniac powers. In striking opposition to this Greek medicine sought, from Hippocrates downward, to find the causes of disease in the tissues and humors of the body, in the influence of food and physical environment. Its view of mental disorders was similar to its view of bodily ones."

As bearing pertinently on the above let the main features of the story telling of the conversion of Saul, the Jew, to Christianity be recalled, it being borne in mind that this was accounted a miracle of the first magnitude, and both the event and the subject were capitalized to the credit of the church to an extent that seems almost inordinate.

Abridged from the Acts it reads:

"The witnesses laid down their clothes at a young man's feet whose name was Saul and they stoned Stephen. And Saul was consenting unto his death. At that time there was great persecution against the church which was at Jerusalem; and they were all scattered abroad. . . . As for Saul, he made havoc of the church entering every house, and haling men and women committed them to prison. . . . And Saul, yet breathing out threatenings and slaughter against the disciples of the Lord, went unto the high priest, and desired of him letters to the synagogues, that if he found any of this way, whether they were men or women, he might bring them bound unto Jerusalem. And as he journeyed, he came near Damascus; and suddenly there shined round about him a light from heaven; and he fell to the earth. . . . And Saul arose from the earth; and when his eyes were opened, he saw no man: . . . and he was three days without sight."

Here is the outline portrait of a young man of unstable temperament and vindictive disposition falling under the sway of conceptions believed to be religious in nature, illustrating the genesis of a fanatic moved by passion, bigotry, prejudice, intolerance so that there was small room for mercy, forbearance, judgment or magnanimity to come into play and who was able to persuade himself that his morbid designs and cruel deeds were in obedience to the will of his Maker. His nature congenitally was cast in the mold of a persecutor for opinion's sake, and the leopard did not change his spots on the way to Damascus; his activities were only directed into another channel. But who can doubt, if Roman law had permitted, that his persecution of the Jews and other disbelievers would have been as fierce as was that but recently directed by him against the early Christians?

The illusions of special sense and other symptoms mentioned in the account need no miracle

for their explanation, as such phenomena fall under the observation of very many general practitioners and are recognized as being due to the operation of natural law. Indeed, if a miracle could be attached to this occurrence it would lie in the fact that Saul did not die on the spot with brain widely torn by a bursting blood-vessel. The raging fury that possessed him, aided perhaps by solar heat, excess or privation as to certain bodily habits or conditions, account for every symptom. If there was no temporary stoppage of the blood current in the cerebral area affected, by thrombus or embolus, it is likely that there was a hyperemia or limited hemorrhage or serous effusion which was soon absorbed as, for three days, he "neither did eat or drink" and possibly no permanent damage resulted.

The accounts of the early days of Christianity come from sources biased in its favor and deeply concerned in its survival and growth, the powers of superhumanism were invoked to testify in its behalf, the fervor of its devotees in an age of superstition and extraordinary credulity regarded everything as possible; stories that would stagger belief in the ordinary person were accepted without question or criticism no matter how much reason and common sense might be outraged, the ruling idea being that such a course was to the greater glory of the faith. Against this flood it is hardly possible that Luke and his works were able to stand entirely uninfluenced, and it is reasonable that doubt has been expressed that he really held fast to his scientific moorings under such tremendous pressure, but amid the drift and sediment of this turbid emotional and ecclesiastical overflow there still appear some signs of Luke as a medical man erect and unswerved from the principles of his early profession.

That which a man leaves undone may be of more significance and what he does not say may be more eloquent than if he gave free rein to deed and word, and while Luke as a chronicler, or others in his name, gave currency to much that only unreasoning credulity could accept, he himself so far as can be known in no place or time ever laid claim to or exercised in any degree what was asserted to be miraculous powers in human healing. In this attitude of abstention not only were the ingrained teachings of scientific medicine justified but characteristics of the sustained dignity of the Greek spirit were revealed which, briefly were obedience to reason, the duty to seek out underlying causes, to refrain from haste in judgment, to interpret thought in clear forms, to give fitting expression to feelings and sympathies and the like, and to every one of these tests Luke rings true, so far as can now be known. With wise sufferance and administrative tact, no doubt he chose not to see much that he was not prepared to approve, and it must have been his sorest trial to moderate and hold within bounds much that was done by his asso-

ciates. Moreover, in some of the best work put forth in the name of another apostle there is the mark of constructive skill and creative force that shows the Greek hand and intelligence.

As many volumes have been written on the subject of the reputed miraculous healings set out in the apostolic writings, only two of such occurrences, typical in kind, will be considered now, both of them having been pointed out on a former occasion; and it may be that this was one of the first instances in which the scientific psychology of the Greek school and healing by Christian faith were naturally and rationally wedded together.

In the serious slang of that age insane persons were spoken of as having devils, foul or unclean spirits, just as to-day inelegant expressions are used to signify similar opinions. The case referred to is that of the madman of Gadara, and the chief points will be brought together by condensing and merging the stories as told by Luke and Mark, as follows:

"And they arrived at the country of the Gadarenes, and when he went forth to land there met him out of the tombs a man with an unclean spirit, which had devils a long time, and wore no clothes neither abode in any house, and no man could bind him, no, not with chains: because that he had often been bound, and the chains had been plucked asunder and the fetters broken by him. And night and day he was in the mountains, and in the tombs, crying, and cutting himself with stones. But when he saw Jesus afar off, he ran and worshipped him, and cried 'I adjure thee by God, that thou torment me not.'"

The account continues and tells how after some parleying as to terms the "devils" betook themselves into a herd of swine, which stampeded over a cliff and were drowned, whilst the people were somewhat disturbed by the different events but, later, coming forward, they "found the man out of whom the devils were departed, sitting at the feet of Jesus, clothed, and in his right mind."

It is unlikely that the insanity of this man was of a serious type at its beginning, his words and actions probably showed a departure from the normal which led to his being abused and tormented by his fellows with the result that his feelings were hardened into fierce resentment as he no longer saw a friendly face nor heard a single kindly spoken word. News of uncommon events travels fast, and much of what was said and done beyond Galilee no doubt had come to his ears, kindling in him the burning hope of deliverance from suffering, his adjuration against any more torment being freighted with clear and pathetic meaning. Nor was his hope in vain, for in the person of the Great Physician he found a friend—compassionate, responsive, benignant, inspiring veneration and implicit trustfulness in his harried nature while his expectancy of cure was keyed to the tensest pitch—a friend whose gracious sympathy toward the afflicted opened the psychic field to the powers of overruling sug-

gestion so that at the ripe moment, when the healing word was spoken the response was instant; the cure was wrought and the man was again "in his right mind," which implies that there had been merely a suspension of normal functioning, a fault of proper gearing in the mental machinery concerned, rather than any organic disease.

When the human face flushes or pales because of emotion it is understood that the vascular change thus evidenced is actuated by centers seated in the brain which thus respond to sensory stimulus, external or otherwise; and, similarly, the blood supply of brain areas may be changed by such influences as is shown by sensations of dizziness, swooning, etc., so it would appear that the madman of Gadara suffered an inhibition from some cause unknown which rested on that area commonly called the seat of reason, such cause possibly being faulty circulation, poor nutrition, impaired coordination or autotoxic conditions. That a powerful external stimulus affecting the disturbed center was the proper treatment was proved by the outcome, the pathologic interdiction being duly lifted. Similar results have been achieved many times by men who possess psychologic power in winning and magnetic form, the rule of reason, as applying to the laws of body and mind, being strictly followed, medically proved, and shown to be capable of yielding remarkable results.

The second example of what is called miraculous healing was of a different kind and the account which follows is summarized from the Acts:

"A certain man lame from his mother's womb was laid daily at the gate of the temple; who, seeing Peter and John about to go into the temple, asked an alms. Then Peter said, 'such as I have give I thee: In the name of Jesus Christ rise up and walk.' And he took him by the right hand and lifted him up; and immediately his feet and ankle bones received strength. And he, leaping up, stood, and walked and entered with them into the temple."

The reason for doubting the genuineness of this miracle rests on the facts of embryology, anatomy and physiology also being concerned. Dating back to fetal life there was a physical defect with absence of a motor function pointing to the non-existence or abortion of the appropriate center in the man's brain.

If the narrative did not state so positively that the lameness was prenatal it would be conceivable that a functional paralysis of legs and feet was present and which a commanding suggestion from a source of power relieved, for a time at least. But if the brain of the unborn child lacked the foundations that should supply muscular strength and movement to the lower limbs, then to assert a miracle in such a case would be as hazardous to sound reason and scientific truth as would be the claim that a full-

grown oak could spring from an acorn in the twinkling of an eye. A weak element, from a medical viewpoint, in instances of so-called miraculous healing is that the later history of its subjects is seldom known, that is whether they remain healed or relapse eventually into former conditions.

It was a heavy blow, indeed, to both religion and humanity when the early church, in dealing with mental alienation, turned from light to darkness, choosing the gloom of superstition and diabolism rather than the enlightenment of Greek medicine and psychology, and the cruel consequences of this mistake were felt through many darkened centuries in unspeakable barbarities visited on the insane, dungeon, hunger, lash and chains having been their merciless portion. In fact the forms of Christianity were many hundred years old when, in the eternal fitness of things it was ordained that the medical hand of a real follower¹ of the Great Physician, and of the Greek physician, should strike the shackles from the madman's limbs, and disorders of the brain were shown to be no more diabolical in origin than ailments of other parts of the body.

Is it not the first duty of every church, claiming such a mission, to endeavor to save the soul even before a child is born, by joining in work for just conditions of earthly living and human comfort which the great body of mankind has never yet known—the birthright of the child, as father to the man, being so watchfully guarded that the growing brain shall suffer no blight from any form of avoidable disease, casualty, destitution or cruelty; so that every region of that brain, designed by its architect as seats of intelligence, reason, justice, conscience, righteousness, shall not fail of normal growth and wholesome functioning! But as of old and since, in varied form, and under every sun, too often ecclesiasticism has been shown to be but a blind guide, prone to strain at gnats and swallow camels, neglecting the weightier matters of the law, judgment and mercy.

"The brother whose praise is . . . throughout all the churches"—such was the telling tribute paid to Luke by his fellows and which voiced his distinction as both physician and apostle. As before suggested, definite proofs showing his high scientific character are not within reach, having probably been forever lost in the confusion and darkness of the early church. But there do exist inferential circumstances which discerning physicians may perceive tending to show Luke as one of the worthiest figures in medicine that history can offer. This distinction

lies in the fact that Hippocratic medicine, strictly taught on broad lines as it was, yet failed to take due account of the full power of mind over matter, as the demonstration of healing influences had never before been witnessed in such supreme and convincing form as was seen during the lifetime of Jesus. Such instances as that of the madman of Gadara may have come to his knowledge and there can be little doubt that the trained intelligence and keen penetration of Luke enabled him to divine the dynamic modus of the cure, and that he saw the importance to scientific medicine of such legitimate psychologic aid, this recognition and action being thoroughly in keeping with the habit of the Greek mind. If all the facts could be known they would most likely point to him as the first great medical psychologist in the era which he did so much to introduce.

With the sublime and sympathetic diagnosis of human ills, their cause and cure, as made by the Great Physician, Luke the physician was in full accord as he, of all the disciples and teachers, best divined the true spirit of the new faith and pointed the proper way, his work being vital to the form which it in part assumed; so that, in point of value of service to humanity and true religion—not mere theological doctrine—he stands easily first of all the apostles, a distinction due to natural powers of mind originally trained and devoted to the ministry of medicine for the healing uplift of his fellowmen. But his name and fame have been in the keeping of others than physicians, which is not to the credit of our profession, for his must have been one of the master minds of all time, and should accordingly be honored and venerated as one who stood as best he could a beacon light in the cause of scientific medicine: *Lux lucet tenebris*.

Odd Fellows Building.

OCULAR LESIONS CONNECTED WITH VASCULAR DISEASE *

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A progressive sclerosis of the peripheral ends of the retinal vessels or of the chorio-capillaris (of the chorioid) which supplies the outer layers of the retina, causes the probably congenital retinitis pigmentosa—an atrophy of the nervous elements, pigment migration into the retina, hyperplasia of the supporting tissue, and sometimes glaucoma secondary to the blocking of the filtration angle by granules of pigment which have found their way to the spaces of Fontana.

A localized progressive sclerosis of the vessels to the macular region is probably the cause of

1. Phillippe Pinel, French physician, born at Saint André, Department of Tarn, April 20, 1745, died in Paris, Oct. 26, 1826. "He gained for himself undying fame by his reformation of the old barbarous methods of treating the insane." Although vigorous opposition was made to Pinel's philanthropic opinions he fortunately succeeded in thoroughly establishing their correctness, and his system in a few years prevailed over the whole of Europe.

* Read before the Missouri State Medical Association, May, 1913.

retinitis circinata—a circle of degenerative spots arranged around the macula lutea.

Syphilitic disease of the chorioid is often seen associated with marked sclerosis of the blood-vessels.

The above examples of eye-disease rather typify the close relationship of ocular lesions and vascular changes which are not necessarily "arterio-sclerotic."

As to arteriosclerosis, or more properly angio-sclerosis, you will notice first that these normal retinae show the optic disk margin distinctly defined, the size of the arteries to that of the veins about as 2 to 3, the vessels translucent and the light streak reflected from the arteries broader than that from the veins.

In angiosclerosis, the arteries become tortuous and change in size and caliber, the central light streak becomes more distinct on account of loss of translucency—in more advanced cases the white stripes resulting from periarteritis follow. The veins also become tortuous, show changes in caliber, are "strapped" by a crossing artery and their walls also may be finally so thickened that the blood-stream disappears and only white stripes remain. Edema and hemorrhages often appear.

While tortuosity by itself is not pathognomonic of incipient disease, Black's method of observing the blanching of the vessels under finger pressure is often of great assistance in confirming the suspicion. If the blood-stream is not rather easily obliterated by pressing on the normal globe through the lid, one is justified in believing that the vessels are pathologically resistant. A little practice enables one to judge rather accurately as to the amount of pressure necessary to yield this knowledge.

The importance of early detecting these signs can not be overestimated. When we think of the eye, not as a peripheral sense organ but as a part of the central nervous system, we can appreciate why the ophthalmologist, seeing a hemorrhage in the retina, knows that his patient has had his first attack of apoplexy.

The process is a chronic inflammatory one characterized by "proliferation of the endothelium of the intima and formation of new connective tissue, especially elastic fibers." We have then a proliferative endarteritis resulting in irregular excrescences or obliteration of the lumen. The silver-wire arteries of the ophthalmoscope are the final result. Of course, the adventitia becomes greatly thickened and perivasculitis adds to the picture (Parsons).

Clinically, the one universal characteristic which impresses the ophthalmologist in these cases is the high blood-pressure mental attitude of the patient. This is true of practically every patient with eye-symptoms whether with glaucoma or without. Because he feels well he cannot appreciate the danger of disregarding our warn-

ings. One man of past 50 with systolic pressure of more than 200 mm. felt well and came for glasses only because he could not read as well as formerly and because the vision of one eye was blurred and he had not been able to "get a fit" from an optician. The ophthalmoscope showed not only a number of retinal hemorrhages but organization into the vitreous with new blood-vessels (retinitis proliferans). After I had insisted on the need of perfect quiet, he told me that he simply must go on to Texas the next day and asked me if he could not take a swim that night.

In the earlier works on ophthalmology patients with glaucoma were described as nervous and of the kind in whom one would expect loss of circulatory balance: hence sudden emotion, great sorrow and exposure to cold were exciting causes of acute inflammatory glaucoma through causing a congestion of the ciliary processes, while it was said that for some unknown reason patients with simple or chronic glaucoma were difficult to manage and indifferent to instructions. Patients with one eye diseased were therefore warned to expect the disease in the other eye and to come at once if they noticed any of its prodromata (e. g. rainbow vision, change in the range of accommodation, etc.). But the majority of such patients still delay consulting any one until they discover that they are half blind. By that time changes have taken place in the filtration angle which even an operation will not remedy.

In 1910, 21 per cent. of glaucoma patients applying at the clinic of the Budapest University were blind in both eyes and 50 per cent. had lost even light perception in one eye.

When the manufacturer mentioned by Dr. Smith first consulted me in 1902, his fundi were normal and the vision of the right eye was $15/91/2$, while the left eye was hyperopic with vision of $15/24$. The retinae remained normal until March 17, 1908, when he came with the complaint that he had noticed opacities before the right (good) eye which moved when the eye was turned. He had been conscious of these since the fall before when, in striking a golf-ball, he thought that some dirt had struck the eye. He allowed several months to elapse before he sought advice. His right (good) eye showed a hyalitis or muddy vitreous with slight strapping of the veins by the arteries. The left fundus was normal. He was referred to Dr. Smith for treatment. Two years later he came with a "waving" before the left (diseased) eye. The right eye was unchanged in appearance. In the left there was optic papillo-edema, the veins were large and there were capillary hemorrhages. The vision was $19/75$. Blood-pressure (systolic) was 172 mm. The patient insisted on taking a long journey which he felt was a greater duty than preserving his sight. When he returned two weeks later his vision was reduced to $19/150$.

and blood-pressure was 178 mm. The retina of the left eye was full of fresh venous and capillary hemorrhages. He then began to obey instructions and in January of this year he was 73 years old, feeling perfectly well and still has one normally seeing eye.

Unfortunately the patient's general symptoms are often misinterpreted by the physician and a patient is treated for "nervousness" or "hysteria" without having an adequate examination (of eyes, blood-pressure, etc.). One lady came with the history of having been of a highly neurotic disposition, having manifested attacks of hysteria on numerous occasions and of noticing a recent blurring of vision in one eye. She proved to have a macular hemorrhage. My Janeway gave a systolic pressure of 185 and Dr. Albert E. Tausig found chronic interstitial nephritis and mitral insufficiency with systolic pressure of 175 and diastolic 100 mm. She had always bought her glasses from an optician and her physician had probably become accustomed to her complaints of nervousness.

We have also seen women with "nervous" headaches and other symptoms who had had their general discomforts dismissed as a part of the change of life when the ophthalmoscope and sphygmomanometer revealed a high blood-pressure.

The Relationship of Glaucoma to Increased Blood-Pressure is difficult to determine because there are so many different kinds of glaucoma that the various theories do not explain all cases.

Whether Henderson's theory of a primary sclerosis of the filtration angle, or Heerfordt's theory of a valve-like effect of the "Vortexinscleralplatte" or Fischer's edema theory of colloid imbibition is each correct in certain cases, we do know this, that given a blocking of filtration, a venous stasis with increased tension in the eye, there will come sooner or later such changes in the vessel-walls as are seen in angio-sclerosis.

Whether the original causes of the changes in the vessel-walls also cause a sclerosing process in the filters from the eye which is simply coincident with the angiosclerosis, or whether the increased resistance to the flow of blood by the intra-ocular pressure causes a compensatory sclerosis of vessels, the later changes in the disease are largely dependent on the condition of the vessels and on the general blood-pressure, and this must be reduced before we can hope to relieve symptoms, while operation is out of the question until danger of hemorrhage has been as far as possible eliminated.

The plates of Pagenstecher and Genth's *Pathology of the Eye*, published in 1875, while not mentioning arteriosclerosis as a cause of glaucoma, show a typical degeneration of capillaries and obliteration of the lumen of a larger vessel connected with a case of hemorrhagic glaucoma.

"The walls of the artery appear to be so thickened that its lumen is occupied only by a row of polygonal blood-corpuscles. At one small spot in the artery itself and in a twig, complete obliteration has already taken place. No indication is present of the earlier structure of the vessel. The capillary network shows varicose bulgings as well as ampulliform dilatations. Fusiform thickenings also occur here and there in the walls. At one spot a capillary is completely obliterated."

Humboldt Building.

TYPHOID FEVER *

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Typhoid fever is an acute infectious disease, the definite cause of which is the specific bacillus of Eberth. Pathologically it is characterized by hyperplasia and sloughing of Peyer's patches and toxemia. Clinically it is characterized by its gradual onset, peculiar temperature curve, swelling of the spleen, rose-colored spots, tympanites diarrhea, sometimes intestinal hemorrhages, perforation, etc. The average duration of the disease runs three, four, and even eight weeks.

History.—Until 1829 typhoid fever and typhus fever were known as one, under the name of typhus fever. In 1838 and 1839 Gerhard of Philadelphia, from his experiences and laboratory work, separated the two diseases and proposed the name of typhoid fever. Since then there has been a wide difference of the two diseases.

Pathology.—The primary morbid changes are in Peyer's patches and solitary glands of the intestines, and are divided into four stages: (1) Stage of Infiltration. During this stage the lymph-follicles, Peyer's glands, and solitary glands in the ileum, jejunum, in fact, all glands in the small intestines, are likely to become engorged. (2) Necrosis. This stage begins in from eight to ten days and usually subsides on or about the twenty-first day. This process is brought about by cell infiltration and partly by compression and the shutting off of the blood supply of the parts. The depth to which the ulcers form varies from a slight involvement of the mucous membrane to a perforation of the outer, or serous, coat. This varies with the degree of severity of the attack. (3) Ulceration. The size and shape of the ulcer corresponds exactly to the necrosed area, and hemorrhage will result if blood-vessels are within the area of ulceration. (4) Healing. This process follows promptly the formation of the ulcer. The healing process advances inward from the border of the ulcer till we find a smooth scar tissue covering the area involved.

Etiology.—The bacterium which is the specific cause of typhoid fever was first discovered by Eberth. Since then it has been corroborated by many other bacteriologists.

Age.—Typhoid fever may occur at any age. However, it has a special liking for the strong adult from fifteen to thirty years of age. The male and female are alike liable to contract this disease.

* Read at the meeting of the Wright County Medical Society, Dec. 13, 1913.

How the Bacilli Enter the Body.—In the great majority of cases the bacilli enter our body by means of water or food, carried down through the alimentary tract until they find the alkaline secretions of the lower bowels, which furnishes them a fertile soil in which to grow and multiply.

Clinical History.—The average period of incubation varies from ten days to three weeks. During this period the patient may experience but little deviation from the normal, but in most instances there is what we call prodromal symptoms, such as languor, loss of appetite, nausea, headache, pains in the back and limbs, and a disinclination to exercise. On account of the peculiar temperature curve in typhoid fever, its course falls into three periods, (1) development, (2) acme or fastigium, (3) decline.

Stage of Development.—The invasion as a rule is gradual, the symptoms being chilliness and feverishness, with increase in severity of the prodromal symptoms. Typhoid fever rarely starts in with a rigor, (if a typical case). At about this time we are apt to have nose bleed and a general prostration with severity enough to compel the patient to take his bed. The symptoms at this period usually increase in severity very rapidly. The skin becomes hot and dry, the tongue coated, the sleep disturbed. Great thirst and usually constipated at this stage. The pulse runs from 90 to 110.

Fastigium.—Commences usually from four to eight days, and lasts about two weeks. During the first week of the fastigium the symptoms become more marked. The fever runs high, from 103 to 104, and takes on a more continued type. The pulse is accelerated, the headache disappears, mental dulness is very prominent, and there may be some delirium. The belly is somewhat swollen and diarrhea replaces the constipation. The spleen becomes enlarged and tender, and about the eighth or tenth day of the disease the rose spots appear.

Decline.—On about the twenty-first day, in favorable cases, the fever begins to decline and the other general and local symptoms begin to disappear, and the patient makes his recovery.

Diagnosis.—Unless all the chief symptoms are present with a clear history, it is a golden rule not to make a positive diagnosis. If the case is a typical one, the history of the gradual development of the disease, marked by such symptoms as headache, languor, anorexy, dulness, slight chills, increasing fever, and nose bleed, can be obtained and will justify a strong suspicion of typhoid fever. Then if, in addition to the above, we find diarrhea, spleen enlargement and tenderness, tympanics, gurgling and tenderness in the ileo-cecal region, and the rose spots, the diagnosis of typhoid fever is made highly probable. However, the typical cases are very rare and it is a safe course to pursue to withhold your diagnosis until you can be positive.

Prognosis.—As in all other acute infectious diseases, so in typhoid, the prognosis depends on three main considerations. (1) The severity of the type of the infection; (2) circumstances and surroundings of the patient; (3) the presence or absence of dangerous complications.

Treatment.—The general conduct of the case, including skillful nursing, is of paramount importance in the treatment of typhoid fever. The patient should be put to bed as soon as the disease is suspected and kept there, in a recumbent position, until the end of the attack. The sick-room should, if possible, have a sunny exposure and be kept well ventilated and free from strong currents. The back and hips should be bathed with a solution of borax, alum and alcohol, to

prevent bed sores. The use of the bed pan and urinal should be imperative, especially in the severe cases. The mouth should be kept clean with some good mild antiseptic. The bed should be kept scrupulously clean and all vessels used for the excreta should be sterilized after each using.

Diet.—The diet is of great importance and should be liquid. Good, wholesome, sweet milk is one of the best diets. Give it freely and watch for curds. If curds appear, lessen the amount. If milk enough cannot be given, then give meat juices and broths, albumen water, lemonade, etc. Pure cold water is most excellent for the typhoid patient and it should be given them regularly. It is a good diuretic and an antipyretic.

Stimulants.—Watch the patient's heart and when it shows signs of weakening stimulant should be used. Alcohol in the form of whisky has, to me, been one of the best stimulants to give, since it counteracts the effects of the poison of the disease as well as stimulates. Usually stimulants are needed about the beginning of the third week of the disease. Strychnin is another most valuable stimulant in this disease, either used alone or in connection with the alcohol. I use either one or both combined where I think indicated.

Hydrotherapy.—There is at the present a general agreement among medical authors and practitioners that the best mode of treating typhoid fever is by means of the cold bath. This was originally introduced by Currie of London,—more than a century ago. I use but very little drugs of the antipyretic type in the treatment of this disease. I rely almost entirely on the cold sponge bath. I instruct the nurse to give it as often as needed to keep the temperature in reasonable bounds.

Intestinal Antiseptics.—These I use in every case notwithstanding authors tell us they neither destroy the bacilli nor counteract their toxins. I usually give about 2 gr. of salol combined with 2 gr. of cinchonide, with sometimes a little Dover powder, given in a capsule.

If the stools are too frequent and have an offensive odor, I give the Abbott intestinal antiseptic composed of sulphocarbolate of lime, zinc and soda. These to me are very useful in treating some cases. I also like to give a little hydrochloric acid combined with essence of pepsin. This, I think, aids the digestion and assimilation of the food. Turpentine used in stipes is very useful in the treatment of the tympanites of this disease. It also has a use given internally in case of much delirium, tympanites or hemorrhage.

The treatment of typhoid fever is a problem for each one to work out for himself. The symptoms and conditions must be met as they present themselves—no two cases ever present themselves just the same, hence it is impossible to outline a treatment for all cases. Study and individualize your case, then select the best remedies for the individual case and apply them accordingly.

It might seem indiscreet to close my paper without some mention in regard to the anti-typhoid vaccination.

Fellow doctors, we are fast approaching the time when all germ diseases will be treated by

serum therapy, and, in my opinion, this is the only rational treatment for such diseases. By it we build up the antibodies of the system and enable it to combat the disease, destroy the germ and overcome the deadly effect of the toxins by them produced.

Our government is to be congratulated on the fact that they compel all enlisted men to be vaccinated against typhoid fever, the same as against small-pox, and, by so doing, they have decreased the death-rate of this dread disease in our army to one-sixth of the best record ever made before vaccination was made compulsory, and the number of cases has been reduced to one-tenth of the best record ever made before vaccination. This was the record made in 1912. It is too early to get the complete record for 1913, but the chances are that the rate will be still further decreased, as reports for the first five months of 1913 show that not a single case of typhoid fever existed in the army. This is, no doubt, due to the precautions taken in compelling every enlisted man to be vaccinated against typhoid fever.

POLIOMYELITIS ACUTA; CASE REPORT *

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AND

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Margaret B., white, 3 years of age, was admitted to Bell Memorial Hospital Aug. 22, 1913, on account of paralysis of the right leg. The admission diagnosis was poliomyelitis acuta, made by Dr. Alfred O'Donnell of Kanopolis, Kan.

The personal history is uneventful, the patient having had no illness until the present, but has always been somewhat constipated. One exception might be noted, namely, a difficulty in speech. The patient talks with considerable effort and has command of but few words, yet is keen mentally for her age.

About six weeks before admission she had an attack of fever, accompanied by nausea and vomiting, lasting several days. As the fever subsided paralysis of the right leg developed. The loss of motor power was at first complete, but at the date of admission there had been some improvement. The child was at first irritable and cross, but these mental symptoms disappeared rapidly during the convalescence from the acute stage of the disease. The patient is a well-developed and well-nourished girl, large for her age. The eyes react equally to light and distance, and the fundi are normal. The tongue is clean and the teeth are good. Heart, lungs and abdomen are nega-

tive. There is some tenderness over the lumbar vertebrae.

In the right leg the muscles which produce motion at the ankle and knee are completely paralyzed and flaccid. Movements at the hip joint are normal in direction but diminished in strength. All tendon reflexes are absent and Kernig's sign is mildly positive. Sensibility to pain of both the skin and the muscles is somewhat reduced. The left leg is somewhat weak, particularly as to the muscles which control movements at knee and ankle. The patellar reflex is present but weak, and the Achilles reflex is normal. The abdominal and gluteal reflexes on both sides are equal and normal. The legs are of equal length. The circumference of the leg about the left calf is 16.2 cm.; right calf, 14.5 cm.; above the right knee, 19.0 cm.; above the left



knee, 21.0 cm. The electrical reactions were tested Aug. 30, 1913. With the galvanic current the arms and left leg reacted to a current of 6 milliamperes. In the right leg, the rectus muscle reacted to a current of 12 milliamperes, the adductors to one of 14, the anterior tibial to one of 16 and the sural muscles to one of 16. A strong Faradic current was required to produce movements.

In the differential diagnosis of this case, one must consider first neuritis. The absence of tenderness in the affected parts, the sudden onset of the paralysis, and the presence of the Kernig sign speak strongly against it. Meningitis cannot be excluded absolutely because no lumbar puncture was made. The clinical course is cer-

* Read before the Jackson County Medical Society, Oct. 14, 1913.

tainly against both the epidemic type and that due to pyogenic organisms. One must keep in mind, however, that in acute poliomyelitis there is nearly always some meningitis of the spinal cord, and often of the brain. In the present case the mental irritability was probably due to round-cell infiltration and edema of the cerebral leptomeninges. Syphilitic myelitis with meningeal involvement might be considered a possibility. The clinical course was certainly not typical of this condition, and there is no history nor other evidence of hereditary lues. The Wassermann reaction of the blood serum is negative. The onset, the time of appearance of the paralysis, the muscles affected and the subsequent partial recovery, all point to the diagnosis of poliomyelitis acuta.

During the acute stage the patient was given hexamethylenetetramine. After the acute symptoms subsided and the paralysis appeared, strychnin was administered in small doses, and daily massage was given, with manipulation of the affected joints in order to prevent deformity.

At the present time, fifteen weeks after the beginning of the paralysis, the power of the right leg is nearly normal. Voluntary movements have returned at the knee and have improved at the hip. There is, however, still no movement at ankle and toes.

There will probably be no danger of deformities at knee and ankle if massage is continued long enough, perhaps from twelve to twenty-four months. The paralysis at the knee will probably improve so that no brace will be needed. The ankle joint should, however, be carefully guarded by some orthopedic appliance or operative procedure.

There are two features in the case which are worthy of mention. In the first place, the long continuance of the Kernig's sign calls attention to the fact that some degree of meningitis may endure for several weeks. The case is presented especially, however, on account of the absence of motion at the toes. Paralytic lesions affecting the lower neurones are more or less diffuse. They affect the large muscles and interfere with gross movements, leaving, as a rule, the finer muscles unaffected. On the contrary, in lesions of the upper neurones, such as internal capsule paraplegias, the paralyzes are most severe and persistent in the muscles which concern the finer and more delicate movements. In the present case with a lower neurone paralysis of such an extent, one would expect to find motility in the toes preserved.

To summarize, the case presents three outstanding features; the marked meningeal involvement, the decided improvement under medical treatment, and the anomalous persistence of paralysis of the toes.

Rialto Building.

BILATERAL RENAL CALCULI

With Report of an Interesting Case Coming to Operation *

ORVILLE H. BROWN, M.D.,
ST. LOUIS

AND

EDMUND A. BABLER, M.D.,
ST. LOUIS

The possibility of renal calculi occurring bilaterally should be kept constantly in mind in all suspected cases of nephrolithiasis. Early diagnosis and prompt surgical intervention are necessary to secure the best possible results. The following very interesting case came under our attention:

Wm. A., painter, aged 42 years; was admitted to the Medical Department of the City Hospital on July 3, 1912, with a provisional diagnosis of lumbago and nephritis.

Family History.—Negative.

Past History.—Patient has had the usual diseases of childhood; an attack of rheumatism at the age of 19, and a chancre at the age of 30 years. In the main has always enjoyed good health until the beginning of the present trouble.

Present Trouble.—Seven years ago he was suddenly seized with severe colicky pains in the region of the left kidney which lasted two weeks. He has had more or less pain in the region of the kidney since that time. About three years ago he passed a stone. About a year ago he had a severe attack of pain in the left kidney region which radiated along the course of the ureter. This attack lasted about three days, and there was more or less tenderness in the region of the kidney for several weeks. About ten days ago he began to have chilly sensations followed by attacks of pain in the region of the left kidney. The pain has been more or less severe and is increased by exercise. The patient states that he passed a second stone about a week ago.

Physical Examination.—The patient is well-developed and well-nourished; expression is apathetic. Heart and lungs apparently normal. The liver extends from the lower border of the fourth rib to the lower border of the tenth rib. The spleen is not enlarged. There is a slight tenderness in the left iliac region, and marked tenderness on palpation over the region of the left kidney.

X-Ray Examination.—X-Ray examination shows two stones in the right and one in the left kidney.

Examination of the Urine.—On admission the urine showed albumin, granular casts and pus cells. On July 11 the urine did not show albumin or casts, but it was alkaline in reaction. Subsequent examinations showed pus cells, and albumin not constantly present. On July 27 Dr. Robertson was requested to do a urethral catheterization, with the following results: The right kidney excreted practically all of the urine. Examination of the specimen showed same to be acid in reaction and free from albumin, sugar, and casts, although it contained a few red cells. The quantity obtained from the left kidney was insufficient for chemical analysis although catheter was left *in situ* several hours. Dr. Robertson concluded, therefore, that only the right kidney was functioning.

* From the St. Louis City Hospital.

On August 1 Dr. Robertson made a phenolsulphonephthalein test for kidney function. He injected 1 c.cm. of the phenolsulphonephthalein solution with the result that the drug made its appearance in the urine fifteen minutes after the injection. The patient was catheterized an hour later and the specimen showed elimination during one hour of 43 per cent. The patient was again catheterized an hour later and the specimen showed elimination of 17 per cent.—a total elimination of 60 per cent. in two hours.

Examination of the Blood.—On July 12 the leukocyte count registered 8,400. On July 27 it registered 10,600.

Diagnosis.—Bilateral nephrolithiasis with a pyonephrosis of the left kidney.

Treatment.—Operation was recommended. Patient was transferred to the surgical department.

Operation.—The left kidney was exposed through the usual incision. It was found necessary to cut through the twelfth rib in order to expose the organ thoroughly. The kidney was found intensely distended,

shortly before admittance, at which time he passed a small stone. The x-ray picture now showed a single stone about the size of a filbert. The patient was afraid of recurring attacks of colic. He stated that he preferred operation rather than suffer subsequent attacks of colic.

Second Operation.—The kidney was exposed under local anesthesia ($\frac{1}{2}$ of 1 per cent. solution of cocaine). Upon reaching the kidney the patient began to complain of a great deal of pain, and a small amount of ether was then administered. Owing to the high situation of the kidney the twelfth rib was cut through. The kidney was palpated but the stone could not be located until a small incision had been made through the cortex and a finger introduced. The stone was removed and the kidney sutured by means of catgut, thereby stopping all hemorrhage. A small drain was placed down to the opening in the kidney and the superficial parts were then sutured and the patient put to bed.

Postoperative.—The patient made an uneventful recovery. The kidney function seemed to be very little if at all affected by the operation.

The most important points suggested by our case are (1) the probable frequency of the lesion and the necessity of skiagraphing both kidneys in every case of suspected nephrolithiasis; (2) the danger of delay in surgical intervention, and (3) the possibility of a successful issue even though the single remaining kidney is more or less pathologic, and the organ attacked.

Frequency.—Joseph found renal stone present in forty infants ranging in age from $3\frac{1}{2}$ weeks to 18 months, coming to autopsy during a period of about a year. Renal symptoms were absent, death being due to digestive disturbances, pneumonia, tuberculosis, etc. In twenty-three of Joseph's forty cases, bilateral renal calculi were found. Bevan¹ estimates that in 20 per cent. of the cases of nephrolithiasis both kidneys are the seat of stone. Kummell found the lesion bilateral in sixteen of his 101 cases. A study of the literature indicates that bilateral nephrolithiasis is not of infrequent occurrence. Joseph concludes that renal calculi are very frequently met with during infancy and early childhood.

Number and Size of Stones.—Bland-Sutton's patient had 40,000 stones in one kidney. In about half of the cases the kidney contains a single stone. In the St. Barth Hospital Museum there are two stones of unusual size; both belonged to the same patient; the stone from the right kidney weighed $36\frac{3}{4}$ ounces, and the stone from the left kidney weighed $9\frac{3}{4}$ ounces. The patient died suddenly; the stones were found at autopsy.

Value of Skiagraph.—McIntyre of Glasgow made the first successful skiagraph of a renal stone in the human body. This report was made in 1896, since which time roentgenologists have become appreciative of stone density. They have learned that the urate and uric acid stones pro-

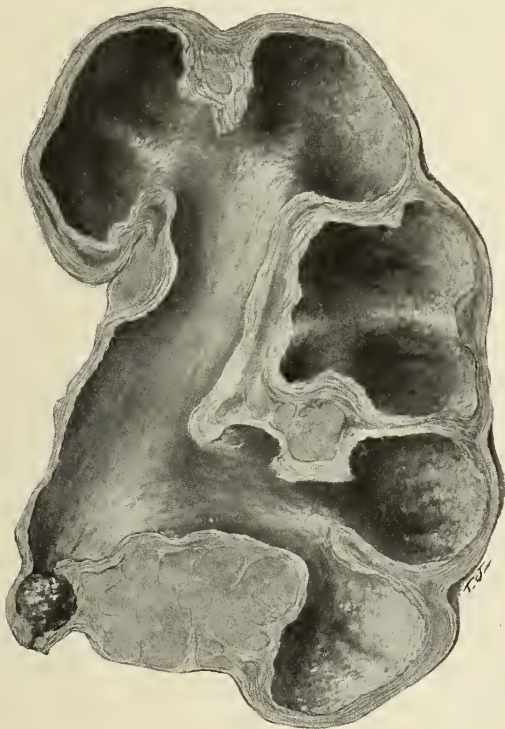


Fig. 1.—Section of left kidney showing stone engaged and obstructing kidney outlet. Kidney practically destroyed.

and after packings had been placed around the kidney a trocar was inserted and about a pint of creamy pus was removed. Examination showed that the entire kidney had been destroyed and the organ was therefore removed, the ureter being severed a few inches below the stone which caused the obstruction. (See Fig. 1.)

Postoperative.—The patient made an uneventful recovery and left the hospital in apparently perfect health, although he carried two stones in his right kidney. The situation was explained to him, and he was instructed to return in case he had any further trouble.

Subsequent History.—On November 7 the patient returned to the hospital and was admitted to the surgical department. He complained of having suffered a very severe attack of colic in the right kidney

1. Bevan: Trans. Amer. Surg. Assoc., No. 26, 1908, p. 259.

duce little or no shadow, while the oxalate variety make a good shadow. We now know that every case of suspected nephrolithiasis should have both kidneys skiagraphed. A negative skiagraph, however, does not always mean absence of stone.

End-Results of Calculi.—Pyonephrosis, chronic sepsis, secondary anemia and calculous anuria frequently terminate medically treated cases of renal calculi. It is equally true that both kidneys may be almost filled with large calculi without causing prominent symptoms or marked distress. In cases of unilateral calculus the remaining kidney is frequently the seat of chronic change. Neve² cites a case of pyonephrosis which perforated through the intestine; death followed. Cullingworth³ reports an interesting case illustrating a not infrequent end-result. The patient was suffering with impacted calculus in each ureter; abdominal section was done and a large stone removed from the right ureter; patient died eighty hours later; autopsy showed destruction of right kidney, and calculi and abscesses in left kidney; a stone was found in the left ureter. Turner⁴ reported a similar case; operation showed pyonephrosis, right kidney; nephrotomy was performed and several stones removed; operation was repeated on left side; two stones were removed; one week later two stones were removed from right ureter; death on eleventh day after first operation; autopsy showed four stones in right kidney; left ureter was obstructed by stone. In Briddon's⁵ interesting case of bilateral renal stone; the right kidney had two ureters, one of which contained a stone. Fowler⁶ reports a case similar to ours; left kidney was pyonephrotic; nephrectomy was performed; later nephrotomy was made on right side and patient recovered.

Operation in Presence of Single Kidney.—It seems probable that one-half of the kidney is capable, under favorable conditions, to carry on the duties of both organs. Watson⁷ removed successfully the lower third of a single remaining kidney, the seat of a cyst. Poncet⁸ did a nephrotomy for calculous anuria in a patient with congenital absence of the right kidney. Pollasson⁹ removed the right kidney for pyonephrosis due to calculi; the kidney had two ureters; patient died, and autopsy showed a stone in the left ureter. Winternitz¹⁰ reports a case of bilateral calculous pyelitis in a horseshoe kidney; the right

half of the kidney was excised, and the remaining half was drained. Ferguson's¹¹ patient was 8 years of age; calculi were present in both kidneys; the right kidney was removed; five weeks later a left nephrectomy was done; at the third operation a stone was removed from the urethra; suprapubic cystotomy was later performed and a stone removed; the patient recovered.

Kelly¹² recommends a transverse incision through the kidney for the removal of stones; the kidney pelvis is distended with 1-1200 silver nitrate. Murphy (Clinics, 1912) prefers to expose the stone through an incision in the pelvis rather than go through the kidney substance.

Comment.—The not infrequent and distressing end-results of medical treatment of nephrolithiasis, unilateral as well as bilateral, warrant the conclusion that, first, every case of suspected renal calculus is entitled to a skiagraph of both kidneys, and, if necessary, ureteral catheterization, in addition to the usual method of diagnosis; and, second, that the early removal of the stone offers the patient the best possible chance.

Humboldt Building—4826 Delmar Boulevard.

REMOTE EFFECTS OF CHRONIC APPENDICITIS

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In a former publication¹ I discussed the influence of chronic appendicitis on the development of a condition of general intoxication and on the development of such diseases as chronic liver and gall-bladder disease and chronic duodenal disease, especially duodenal ulcer. This was discussed on a purely anatomical basis, dealing more especially with the portal system and the abdominal lymphatic system. This publication was the outcome of the study of a series of cases of chronic appendicitis both before and after operation. This observation and study has been extended until now I wish to discuss the role of chronic appendicitis in:

1. The development of various abdominal adhesions.
2. The development of pathological conditions in other abdominal organs.
3. The development of extra-abdominal inflammatory lesions.
4. The development of general intoxication, loss of weight and neurasthenia. The appendix, although of such little physiological importance and being a rudimentary organ, plays an important rôle in general abdominal pathology because

2. Neve: Med. Record, Calcutta, No. 1, 1890, p. 275.

3. Cullingworth: Tr. Path. Soc. Lond., No. 36, 1885, p. 278.

4. Turner: Tr. Clin. Soc. Lond., No. 24, 1891.

5. Briddon: New York Med. Jour., No. 51, 1890, p. 583.

6. Fowler: Tr. Am. Assn. G. U. Surgeons, No. 5, 1910, p. 35.

7. Watson: Boston Med. and Surg. Jour., No. 163, 1910, p. 942.

8. Poncet: Lyon Méd., No. 103, 1904, p. 714.

9. Pollasson: Gazette des Hôp. de Toulouse, No. 7, 1895, p. 349.

10. Winternitz: Orvosi hetil., Budapest, No. 51, 1907, p. 381.

11. Ferguson: Jour. A. M. A., No. 39, 1902, p. 8.

12. Kelly: Jour. A. M. A., No. 57, 1911, p. 19.

1. Lyter: Jour. of the Missouri Med. Assn., September, 1912.

it is the most favorable atrium of abdominal infection.

Although the exciting etiology of chronic appendicitis is little better understood to-day than it was some years ago when acute attacks were explained by the grape seed hypothesis, we have learned three valuable facts:

1. That chronic appendicitis is an infection.
2. That the mucous membrane of the appendix being so rich in lymphoid tissue and the appendicular artery being a terminal artery are material facts in the susceptibility of this tissue to bacterial invasion.
3. That once an inflammatory process is well established in this region, there are certain pathological conditions which develop in certain other organs as the result of the absorption, by the blood and lymph vessels, of toxins and bacteria found proliferating in this tissue.

That chronic appendicitis with its associated chronic intestinal irritation plays a most important rôle in the development of chronic liver, gall-bladder and duodenal diseases has been thoroughly exemplified within the past months.²

These right iliac toxins and bacteria reach the liver through the portal circulation and reach the duodenum through the bile and the lymphatics.

Any one familiar with Muscatello's discussion of the abdominal lymphatics can readily conceive of the toxins and bacteria from a right iliac infection being carried through these lymphatics and portal system to most any anatomical point within the abdomen.

Not only this, but passing on through these vessels into the general circulation will eventually come into contact with every tissue of the body.

Pathology teaches us that the two most formidable barriers to bacterial infection are the reactive agents opsonins, bacteriolysins, agglutinins, etc., and fibrous tissue formation.

Part of Nature's method of curing tuberculosis is by fibrous tissue formation. Nature's method of self-preservation against any foreign body is by fibrous tissue formation.

This same fibrous tissue formation sometimes in itself very rich in lymphatics and blood-vessels, is a local protective agent against bacterial invasion and its extension into adjacent tissues.

Knowing that the bacteria do invade the lymphatic channels and by these lymphatic channels are carried to different portions of the abdomen and here the production of fibrous tissue, inflammatory in origin, to prevent the extension of the infection explains for us the formation of various adhesions so frequently seen in cases of chronic right iliac infection. These same factors may be active in the formation of Jackson's membrane.

This infection of the lymphatic vessels may also be called on to explain why we have so many points of tenderness over the abdomen when

really the primary disease is in the appendix. These points are due, most probably, to a localized lymphangitis where the bacteria have, temporarily at least, blocked the lymph vessels.

By a careful clinical history one may be confronted with a case of chronic streptococcus arthritis originating and being promoted by a right iliac infection. On close observation this joint disease may be seen to clear up following the correct surgical treatment of the right iliac infection.

The relation of chronic focal infections to some of the joint diseases has been thoroughly discussed in recent literature.³

Although it is to be concluded that the tonsil is the most frequent atrium of the infecting bacteria, it is well established that they may also enter through a diseased appendix.

One of the most striking features of chronic appendicitis is the development of a state of general insufficiency manifested by a great loss of weight and the state of neurasthenia. This of course is due to a general intoxication as explained in my former publication.

I was consulted by a woman of thirty who had lost thirty-six pounds within two years and had become extremely nervous as the result of what I diagnosed as chronic appendicitis with adhesions. Doctor Clapp operated and on opening the abdomen he found a very markedly inflamed appendix and a pericolic membrane extending from the cecum to the hepatic flexure. Subsequent to the operation she regained her weight and the nervousness disappeared.

The great loss of weight in these conditions is due to the lymphatics absorbing the toxins of bacterial proliferation and food putrefaction from the lower ileum, cecum and ascending colon. Subsequent to operation these patients became well. From the foregoing it must be concluded that a chronic appendicitis may exert widespread deleterious effects on the economy and for this reason it should be given a most careful consideration both before and subsequent to surgical treatment.

If operated on sufficiently early these patients can be spared much ill health and possibly permanent injury.

SCIENTIFIC WORK IN MEDICINE *

T. O. KLINGNER, M.D.
SPRINGFIELD, MO.

Having been elected the presiding officer of this society for the year just closing, and knowing that it has been the custom for the president to deliver an address on this occasion, I began to

3. Davis: Jour. A. M. A., Sept. 6, 1913; Billings: Jour. A. M. A., Sept. 13, 1913.

* President's Address, Society of Medical Secretaries, St. Louis, May, 1913.

2. Moynihan: Lancet, Jan. 6, 1912.

study about some suitable subject for my address this evening. We have read so much recently of the wonderful progress being made in "medical research" that I have decided to say a few words on "Scientific Work in Medicine."

My subject I knew was a broad one—one on which volumes might be written, but realizing that I would be among my friends who would be charitable with me, and who would not expect a great deal, I set about collecting a few thoughts along this line, and I trust I may be able to say something that will at least justify me in asking your indulgence for a short time.

It is a well-known fact to you all that there has been a wave of enthusiasm affecting the profession for the past three decades, which has been growing stronger each year, and which is now truly at high tide, and this wave has concerned itself chiefly with what has been termed "scientific research." We are all now ready to announce our belief that the laboratory side of medical science must be cultivated as a foundation for the whole superstructure of more or less empirical clinical facts, and we have given this evidence by the establishment of numerous institutions for studying along these lines. I refer to the Rockefeller Institute for Medical Research, the New Orleans Institution for the Study of Tropical Diseases, and your own Barnard Skin and Cancer Hospital. These institutions are all doing excellent work. More will follow. More systematic and accurate methods are being applied throughout the entire field of medical practice than ever before; and every worker, whether wielding the microscope, manipulating cultures or making clinical observations and studying bedside symptoms, realizes the importance of thoroughness and the application of careful scientific methods. It is useless for me, at this time, to elucidate on the many discoveries that have been made in medicine and surgery during the past quarter of a century. You are all familiar with them and know of their importance. But we should never tire of doing homage to the great men who have made these discoveries, many of them at great risk and even sacrifice of life. The great advances that have been made in medical science have not been the work of syndicates with tremendous financial backing and all the paraphernalia and money of great corporations in the full glare of the world, but oftentimes of private individuals, unaided by public funds and public institutions or private gifts. Alone in the laboratory or consulting-room, or the wards of the hospital, or over the patient in the cottage or the hamlet or the tenement of the crowded city, these great deeds have been self-inspired by the physician and surgeon who have wrought them out at great sacrifice to themselves and handed them down to us that we

might prosper and be of service to suffering humanity from the fruits of their toil.

Scientific medicine, by the improvement of health conditions and the strict enforcement of sanitary and hygienic regulations, rendered the Canal Zone one of the healthiest districts on the continent, reduced the death-rate to 3.5 per 1,000 people and made it possible to construct successfully the greatest engineering feat in the world.

Scientific medicine has transformed former hotbeds of disease in the West Indies into flowerbeds of the Tropics.

Scientific medicine has changed the dirty, dingy disease-laden Southern cities into world-famed health and winter resorts, which are visited every winter by thousands of people from all parts of the continent.

Scientific medicine, through the discovery of vaccines and serums, has so modified the virulence of the hitherto most fatal diseases—small-pox, diphtheria and typhoid—that they are now placed in the category of mild diseases and bid fair to be entirely eliminated.

Scientific medicine has attacked that monster enemy of the entire human race—the Great White Plague—so forcibly that its death-rate has been reduced 25 per cent., and in time we believe will entirely conquer it.

Scientific medicine has made it possible to open the cavities of the body, manipulate and study the vital organs without fear of sepsis—the former dreaded enemy of all surgeons.

Scientific medicine, through the untiring efforts of our own Dr. Wiley, has made it possible for us to obtain pure drugs and wholesome food products.

Scientific medicine has made it possible to so clarify and purify the waters of the Great Lakes and rivers that you are now provided with clear, palatable water, free from bacteria, which is the first safeguard to the health of a city.

Then why should not the names of Jenner, Pasteur, Koch, McDowell, Lister and Marion Simms; of Wiley, Gorgas, Flexner, Carrel, Hazen and others be honored throughout the world, even though some of them have long since gone to their reward. The records of these great men, as has been detailed in some of their works, is sufficient justification for my claim—that the public and state owes so much to medical science that they ought to cherish and maintain the medical profession at the highest point of perfection. When we remember that "the health of a city is the wealth of that city," the "health of a state is the wealth of that state," and the "health of a nation is the wealth of that nation," and that on our profession alone do the inhabitants depend for the preservation of health, is it not just and right that our demands be heeded and our wants provided for by the municipal,

state and federal governments? The world may deny the profession towering monuments or tablets of brass, but to such men as I have mentioned, and many others, there can be no denial of a fame more lasting than any graven text.

In alluding to these great masters in medicine, I feel that I am but voicing that sentiment of fraternity which is felt by all men of science of whatever nationality, the world over. Science knows no creed; science knows no politics; science is the broadest of all the interests that are common to humanity. Its influence is not bounded by geographical lines. Natural prejudice cannot confine it. It has no political lines of differentiation. Science reconciles even the bitterest political differences. And permit me to say here that it is my fondest hope that during the year 1913 the profession of this state may make more rapid strides along scientific lines than ever before.

To accomplish this aim, we must be possessed with a spirit of fraternalism that will bring us close together, and imbue us with sympathy one for another. Why should we not bear one another's burdens, for we know full well that the laity is slow to take them up. I cannot give any reason for it, but it is a well-known fact that the general public looks upon the medical profession with a more or less degree of suspicion, and especially is this so in regard to the surgeon. Let a physician or surgeon have the misfortune to have suit instituted against him for some unavoidable bad result from the treatment or care of a given case, and you invariably hear his condemnation on every hand, when perhaps the misfortune was due to an indiscretion on the part of the patient himself.

And may I say in passing that in my opinion the legal profession is largely responsible for the institution of many alleged malpractice suits against physicians. The attorney, ever ready and eager to be of assistance to the one who has been so unfortunate as not to obtain perfect results in the treatment of an accident or disease, urges the patient to bring suit against the physician, holding out to him the idea that he is entitled to heavy damages. Lawyers of this class should be boycotted by the profession and their work condemned in the loudest terms.

Let us study and strive to ever have regard for our brother physicians, for God only knows the burdens he bears and the blood he sweats. Let us rejoice for his success, and sympathize with him when he is in sorrow. Put yourself in his place, is a good thought to keep in mind, and the old proverb "To know all is to forget all," should be ever before us.

While I have digressed somewhat from my subject, I feel that I could hardly pass from the office to which you have honored me without saying something to cause us to remember that

though we may cry as loudly as we please that we are "not our brother's keeper," we are constantly reminded that we are, just the same, and we cannot escape the responsibility, and every honorable doctor should have the protection and sympathy of his brother, and every honorable brother will give it.

Coming back to my subject, surely the doctor has an ever-present incentive to do good work, scientific work. We are all proud of our successes and deplore our failures. First of all his work, if conscientiously and intelligently done, is a help to humanity, and then, what a delightful return he has in the consciousness of an exalted duty nobly done. I sometimes think doctors have more disappointments and worries than most men, but then they have many compensations that do not fall to the lot of others. To my mind there is no field in life where pioneers and pathfinders are more needed than in the advancement of scientific medicine, and where there are greater opportunities for gaining laurels and winning fame.

The Harveys, Jenners, Listers, Marion Simms did not discover one-tenth of the things to be discovered. There can be no doubt that we are practically on the edge of many undiscovered countries and islands in the as yet dark and uncertain seas that roll around the scientific medical world. There is ample chance for many a medical explorer or many a medical navigator yet unborn. The talk about there being no chance for a young man in the industrial or scientific field to-day is all nonsense. Work and worth will win now as always, only they will win more than at any other time in the world's history. In my judgment the public at large and the State Government ought to take a positive interest in medical science. There is not a field for investment on this wide earth that will repay the individual, the public and the state better than in the generous treatment of the medical profession. Its wants should be provided for, its demands heeded and legislation pertaining to public health should be directed by it alone.

Should medical science receive the recognition to which it is justly due, it is perfectly possible for it to reach so high a plane, as for us to conceive with truth of the period when human ingenuity and human skill and human foresight and care shall be so efficiently used that no accidents shall occur, and infectious or contagious epidemics shall not prevail, and the individual shall not die prematurely, but when his days are fully numbered. When this day comes, or when its approximation shall be reached, it will be due entirely to the scientific and humane labors of that profession which this society represents, and over which society I am thankful to have the privilege and honor of presiding at this time.

TYPHOID VACCINE *

J. D. SEBA, M.D.
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The fact that typhoid vaccine is being used in the United States Army as a preventive induced me to make a trial of the procedure in my private practice. The statements I make are therefore simply a report of my personal experience, and inasmuch as this experience is limited only to one season, the experience is not of very much value. I shall, however, always keep a supply of typhoid vaccine on hand, and shall use it as opportunity presents.

My first supply was a box of six ampoules. Since then I have found that it is much better to buy it in bulk—vials containing 18 c.cm. By buying in this quantity you can better regulate the dose without any waste of the vaccine. The first dose should be about 8 minims, of approximately 500 million dead typhoid bacilli, followed ten days later by a full dose or one billion dead typhoid bacilli; after ten days have elapsed a third dose should be given. The vaccine is mainly recommended as a preventive, but it is also sometimes used in the early stages of the disease. Owing to the fact that a positive diagnosis can seldom be made in typhoid fever during the first few days, it is often difficult to state positively whether the patient would have developed the disease had the vaccine not been given. As a preventive the vaccine has proved successful in my own experience, but as far as being of any therapeutic value after the disease has fully developed, the results seem to be entirely negative. In this respect typhoid fever resembles small-pox. No one would think of vaccinating a person against small-pox after the disease had manifested itself. In typhoid fever, as is known, the *B. typhosus* develop in the smaller intestines: after these bacilli appear I cannot see why good results should be expected from typhoid vaccination, but before they make their appearance, or at a time when the typhoid toxin is still in the free circulation of the blood, I can readily see how an injection of 500 million dead typhoid bacilli can neutralize this toxin.

CASE 1.—Miss M. N., aged 30, occupation general housework; was feeling very bad; had fever and dizzy, dull headache towards night; evening temperature 102F.; morning temperature 100F. Without reading full directions a full dose was given—one ampoule or one billion dead typhoid bacilli. The result was that the patient developed a very sore arm, but the temperature went down to normal and did not rise again. No medicine was given internally after the use of the vaccine.

CASE 2.—Young girl employed in a broom factory. She came to me with all the prodromes of typhoid fever. I took her temperature twice a day and it showed all the characteristics of incipient typhoid. After trying internal medication for a day or so, I gave her an injection of typhoid vaccine. Her arm

became sore and she was confined to bed for a day or so, but the temperature went down to normal and has remained so since. There were three members of the family who had never had the disease and as a precautionary measure I gave each a dose of typhoid vaccine, with the result that none developed typhoid.

CASE 3.—O. M., aged 17; was seen on the sixth day of a well developed case of typhoid. He was given 8 minims of the typhoid vaccine, and other appropriate treatment. The case ran a mild course, lasting about twenty days. Other members, eight in all, were given an injection of the vaccine, with the result that there were no other cases in the family.

CASE 4.—Bank cashier who had contracted typhoid fever. I gave him one injection of the vaccine. The disease ran a mild course and patient was at work again in about three weeks. In this case the infection was in all probability due to drinking-water carried from a well near the postoffice. A woman who had worked in this same building, and who had drank the same water but on whom the vaccine was not used had a very severe case of typhoid.

CASE 5.—This is merely a report of the vaccination of myself and family and also that of my colleague as a preventive measure. We all had a slightly raised temperature for a day or so. The precautionary step was successful as none of us developed the disease, although we all had been drinking infected water.

I have used in all about 20 c.cm., or forty doses, and have not seen a dissatisfied patient: all believed themselves benefited.

I wish to report one more singular effect of the vaccine. My oldest son was working in the Kansas harvest fields and also helped thresh wheat in that state. When he returned home he was suffering from a severe otorrhea; the pus came from both ears. Besides giving him an antiseptic ear wash, I gave him an injection of streptococcus and staphylococcus vaccine. This gave some relief, but the ears did not entirely cease discharging. He was feeling bad, and thinking that he might be infected with typhoid fever, I gave him a dose of typhoid vaccine. For a day he felt as if he had taken a dose of quinin, but twenty-four hours later he told me that he was much better. I have examined him since and find that his ears are entirely well and are not discharging any pus whatever.

As long as the typhoid vaccine proves as successful in my experience as it has so far, I shall continue its use.

SMALL-POX is prevalent in various parts of the state so vaccination has become very fashionable in some classes, compulsory in other circles and studiously avoided by the weary willies. St. Louis is trying to provide lodging for the wandering knights of the tin can, but the health department ordered all lodgers vaccinated. About 200 of these floating fairies hastily departed when told to submit to the vaccine. Why they were not held and forced to undergo vaccination is a mystery. This class of vagrants spread disease wherever they go. It is the duty of the state authorities to protect other people from contamination and infection following in the wake of the dirty tramp.

* Read at the meeting of the Gasconade-Maries-Osage County Medical Society, Sept. 18, 1913.

THE JOURNAL

OF THE

Missouri State Medical Association

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FEBRUARY, 1914

EDITORIALS

THE PASSING OF THE QUACK DOCTOR

What one newspaper can do for the protection of the people in a community was demonstrated by the *New St. Louis Star* when it undertook to drive from St. Louis the pernicious quack doctors who infested that city. In less than two weeks after beginning the exposure of these fakers they had all closed shop, several faced charges in the circuit court and the federal court and one of them committed suicide.

The *New St. Louis Star* unearthed the record of the quacks and found a trail of villainy that astounded the community. Fraud and murder are some of the serious crimes alleged to have been committed by some of these fakers in their varied careers. When the *Star* published its first exposure there was consternation among the quacks and a great deal of bold defiance assumed by a few of them. These proved to be the worst offenders and the *Star* quickly laid bare their histories, so that in a few days the whole pack was suppressed and their nauseous boastings ceased. The other newspapers in St. Louis which carried these quack ads soon dropped them.

The St. Louis Medical Society assisted the *Star* and cooperated with the newspaper in the prosecution of this campaign. We believe this is the first campaign against the quacks in which the newspaper undertaking the unpleasant task of exposing their hideous practices sought and received the earnest cooperation of the organized medical profession. In Chicago the *Tribune* has practically driven the quack doctor outside her borders and did the job thoroughly and well, but alone and unaided by the Chicago Medical Society. In other cities newspapers, unaided by the local medical organization, have attacked the problem with more or less success and purged their columns of quack advertising. But in St. Louis the opportunity to cooperate with the *New St. Louis Star* was eagerly seized by the St. Louis Medical Society, and arrangements for a mass meeting were planned and completed in three days with such success that the auditorium in the society building was crowded as it had never been before with men and women of high and low degree anxious to learn from the physicians, from the preachers and from business men how the

treachery of quackery could be prevented and stopped. On the night of the meeting, which was called for 8 o'clock, the people began coming at 7 o'clock and long before the hour for the speaking to begin all the seats were filled, and still the people poured in; they crowded the vacant spaces and overflowed into other rooms, while 1,500 were turned away. An account of the mass meeting is published in the proceedings of the St. Louis Medical Society on another page.

Some of the newspapers in St. Louis have refused these medical quack advertisements for some time, but those which were giving them publicity when the *Star* began its crusade soon veered round and cut out these contemptible frauds. There is reason to believe these fakers will not be foisted on the public again, for the two papers which carried their advertisements when the exposure began will probably find it more profitable to refuse them than to accept them in future, especially in view of the growing sentiment as expressed by one of the speakers, a prominent merchant, that the legitimate business interests are ready to refuse their patronage to papers that carry questionable and misleading advertisements. The *Star* received telegrams of congratulation and encouragement from the president of our state association, Dr. E. H. Miller, from Drs. J. A. Witherspoon, president of the American Medical Association, Victor C. Vaughan, president-elect of the American Medical Association, George H. Simmons, editor of *The Journal of the American Medical Association* and from Mr. Norman Hapgood, editor of *Harper's Weekly*. These were read at the mass meeting.

The *New St. Louis Star* deserves the support and commendation of every decent citizen in the state and of the entire organized medical profession of the state, because these quack doctors do harm not only locally, but entice and defraud many innocent sufferers in various sections of the state through their newspaper advertising. Wherever they are tolerated they are a menace to the morals and health of the people—economic carbuncles that fill the city hospitals with the penniless wrecks they have fleeced and forsaken. The newspapers, however, still carry the advertisements of many nostrums and fakes that claim curative properties for their so-called remedies. Again and again the falsity of these claims has been exposed by the American Medical Association, but in the fight for health the dollar still wins. The motive of the medical profession in warning against their use is questioned by some newspapers and proof of fraud when emanating from our organization does not convince, for the newspapers will not heed. But there is one powerful, potent, irresistible and unimpeachable agent they do obey, and that is the blighting fraud order of the Postmaster General.

The dollar blindness of newspapers is shown in the recent fraud order against Cunningham and his antifat fake. The A. M. A. exposed this man and his methods long before the government attacked him, but his newspaper advertisements continued and his effrontery grew more brazen. Bankers vouched for his repute and the size of his "pile" and thousands of fake testimonials lauded his fatless fraud. The blighting fraud order alone can stop some newspapers from advertising and abetting palpable frauds.

We yield to none in our high admiration for the press of to-day. Its influence is illimitable; its opportunities for good unparalleled. It has pulled down the wicked from high places and lifted the lowly to greatness. It has jailed the grafter, it has exposed the Shylocks and saved the "suckers." In perpetuating the quack doctor and foisting quack remedies on the people the press is culpable, as none of these frauds can exist without newspaper advertising.

But a brighter day is dawning and into the dark ignorance of health conditions the sun of knowledge is shedding light and understanding, and the newspapers, true to their instinct, are beginning to reflect the light of the better day for the health of the people.

THE NEW JOY-RIDER

As between the man in the street and the automobile we hold no brief for the pedestrian. Unless a man is blind or crippled there is no excuse for his getting hit by an automobile in 95 per cent. of cases, save his own foolishness or carelessness. However, it is well recognized that the average man possesses less than the average intelligence. If this were not so there would be more men in automobiles and fewer in front of them. The European municipalities recognize this fact and therefore pass laws making it a misdemeanor for a man to get in the way of a vehicle. In Paris if one is hit by a taxi he goes from the hospital to the police station or to the morgue. If it happens to be the latter place the fine comes out of the estate. This is much more sensible than having the victim's funeral neglected by his blackmailing relatives in their frantic endeavor to instigate as many damage suits as possible against the driver and joint and sole owners of the taxi and any passengers that might have been in the vehicle at the time of the accident.

But you may say, how about the joy-rider? Have we not in this individual a menace to the community that ought to be restrained? Yes, undoubtedly, and that brings us to the subject we started in to discuss, namely, the definition of the modern joy-rider.

We have been accustomed to think of the joy-rider as a young fellow with a "jag," driving a

90-horse-power car at the rate of 60 miles an hour. Every monthly and weekly and daily publication has so pictured him. His machine is usually a racing type of runabout with the exhaust pipes belching smoke directly from the sides of the hood. He is always provided with goggles and is leaning far over the steering-wheel, his eyes strained on the road ahead regardless of the men and women and dogs and chickens that are madly striving to get out of his line of flight. Just as it happens so often in real life, this picture is a pure creation of the brain of the popular illustrator and the penny-a-liner.

The records of the coroner's offices in our large cities have at last given us the true picture of the dangerous (deadly, to be quite accurate,) automobilist. We can scarcely believe it, but truth rising in ghostly form from the mortuary table points accusingly to—*milady*. It is the gentle hand of some real nice society woman driving her own electric and going at a speed of nearly five miles an hour that really does the damage. Intentionally? Why, of course not. She would not intentionally harm a fly, provided some one would kindly call her attention to the fly—introduce her, so to speak. But foolish people will get in the way just as she happens to see Mrs. Smith go past in a new hat—and how can she look at two things at once? Or Mrs. Brown on the back seat speaks to her—and how can she reply without turning her head around?—it would be perfectly rude not to do so. So much for pure carelessness.

If that were all, we could forgive the woman; but unfortunately that is not all. There are many so-called "teas" that are mere excuses for alcoholic saturation. Women come away from such gatherings in no condition to be seen on the public streets, much less drive a machine. Many times they drive a machine home when they would not dare go home in a street car. And what if they do run over somebody? Do they not always take the poor unfortunate to the hospital, and call the next day! Why, they do *everything* they can do to have the victim die in comfort. It is really a new charity, and, besides, it is good for a large-size portrait on the first page of the morning paper and a description of the gown worn by the sad, unhappy lady when she appears at the coroner's inquest.

THE ANNUAL MEETING AT JOPLIN

The Jasper County Medical Society is beginning to plan for the annual session of the Association, which will be held in Joplin May 12, 13 and 14, and committees have been appointed to arrange for the comfort and accommodation of the members. We fully expect this session will be one of the largest in point of attendance in the history of the association, for Joplin is easily

accessible from all parts of the state. The hotel accommodations are ample, and as usual the homes of the citizens will be thrown open to those who do not care to stop at hotels. Connor House will be headquarters and will accommodate about 200 guests. There are other hotels which will be announced next month. The sessions will probably be held in the New Joplin Theater and in the public library. Dr. J. B. Taulbee, Joplin, is chairman of the committee on arrangements.

The program committee is endeavoring to prepare an attractive list of papers and discussions and the outlook is very encouraging for a most entertaining and instructive meeting. There will be no section meetings as these were suspended at the last annual meeting. Therefore, all papers will be read in general session at the Joplin meeting, and the papers will be so arranged that members may hear all the contributions in which they are specially interested and take part in the discussion. Those who desire to submit titles for the program may address any member of the program committee: Dr. E. J. Goodwin, chairman, 3525 Pine Street, St. Louis; Dr. M. B. Clopton, Humboldt Building, St. Louis; Dr. R. T. Sloan, Rialto Building, Kansas City.

All are anxious that this meeting shall be the best that has ever been held, but it will not amount to anything unless the members attend in large numbers. We earnestly appeal to every member who can arrange to leave home for the session to attend, and let 1914 go down in history as the best and the biggest meeting we have ever held.

THE NEXT ST. LOUIS HOSPITAL BOARD

"Beware the ides of March." We do not know what they are or when they are, but anyhow they come along sometime before April 1, so we want to anticipate them a bit. Not that warnings do any good. Mr. J. Caesar was duly and properly warned in accordance with the ethics of all the best soothsayers of his day. He did not choose to heed the warnings and in consequence got in the way of a flock of knives which were planted just where they would do the most good. Rulers have become wiser since the time of Mr. Caesar, however, and if they do not fear knives they do fear public opinion, and incidentally the votes that go with it. Therefore the foreword ere April 1 is on us.

April 1 there will be three vacancies on the St. Louis Hospital Board. What is the opinion of the medical profession of the metropolis in regard to these appointments? Shall they be given to men who are "in harmony with the administration," who will not cause any trouble, but will do what they are told? Or will there be an endeavor on the part of the honorable

mayor to select men who will bring some intelligence to bear on the complex questions which this body has to decide, and on the difficult problems which men in this position have to solve. There is no more important question in any community than the care of the sick and the prevention of disease. True it is that a bridge to East St. Louis is important, but the bridges between life and immortality are much more important, especially to the poor devil without money and without friends who must look to the municipality when he comes to the great crossing.

It is up to the representative medical profession of St. Louis to see to it beforehand that the chief executive has the assurance of their support and advice in choosing good men for these important places regardless of politics. It is better to do a little pulling before April 1 than to do a lot of knocking afterwards.

POPULAR LECTURES ON CONSERVATION OF VISION

The Committee on the Conservation of Vision of the American Medical Association has been waging a campaign for the purpose of instructing the laity in the importance of the prophylaxis and treatment of ocular conditions. This has been done by means of editorials and news items in the daily press, and by pamphlets written in a popular vein. It is now proposed to supplement this work by means of popular lectures delivered before representative lay organizations, especially those having charge of the instruction of children, and before the people at large.

This work, in Missouri, will be carried out under the direct supervision of the Lecture Bureau of the Missouri State Medical Association. It has been planned to have a lecture delivered wherever a request for one is made by the local medical society. It is hoped that every county society in the state realizing the importance of this movement for the conservation of vision will make such a request and will see that the lecturer is greeted by a large crowd.

A large number of oculists have already promised their services as lecturers and others will be added to the list from time to time.

This course of lectures is expected to have a twofold benefit. In the first place, good will result in the form of preservation of many eyes which yearly are lost because of the ignorance of the public of the importance of prophylaxis and prompt treatment. In the second place, the man who has been to a lecture on conservation of vision will be more inclined to attend a lecture on other medical subjects. In this way the public will be educated to get its medical information from its proper source, the medical profes-

sion, instead of from the lying assertions of quacks and patent-medicine advertisers.

But in order for these lectures to be successful it is necessary that there be lecturers—that is, the oculists of Missouri must give their time and talents to the cause; and there must be people to be lectured to—that is, the county societies must request these lectures and the local medical fraternity must exert itself to see that they are well attended. A word here and there, a personal appeal to friends and patients, will insure a good attendance, from which only good results can follow.

RATIONAL THERAPEUTICS AND THE COUNCIL ON PHARMACY AND CHEMISTRY

When the Council on Pharmacy and Chemistry first began its labors it devoted itself to the exposure and the correction of the false claims which were made in regard to the composition of proprietary medicines. Soon it became apparent, however, that the unwarranted therapeutic claims made for proprietaries also were in urgent need of investigation and revision, hence the council extended its work in this direction. This extension made it apparent, in turn, that the entire field of materia medica and therapeutics formed a suitable field for the council's activities—indeed, the therapeutic claims for a proprietary could often not be passed on without a consideration of broad questions of therapeutics. As a result we now find that the Council on Pharmacy and Chemistry is a most potent factor in the establishment of rational therapeutic practice.

As illustrations of the broader aims of the Council on Pharmacy and Chemistry we may refer to the investigation of Hanzlik and Collins on "Hexamethylenamin: the Liberation of Formaldehyd and the Antiseptic Efficiency Under Different Chemical and Biological Conditions," made at the instigation of the council's therapeutic research committee; and to the admission of sodium acid phosphate to New and Nonofficial Remedies. Briefly, the investigations of Hanzlik and Collins show that hexamethylenamin can be of therapeutic value only in the urinary tract, and then only if the urine is acid, which acidity may be brought about by the administration of sodium acid phosphate. Being intensely practical, the council was not content to let it be known that sodium acid phosphate was a suitable means of insuring acidity of the urine; but it took steps also to provide the medical profession with a reliable sodium acid phosphate. With this end in view the association's chemical laboratory examined the market supply, proposed standards for the control of the product and indi-

cated to the council those brands which complied with the standards. These standards having been adopted, the council now describes sodium acid phosphate in New and Nonofficial Remedies, gives pertinent directions for its use and indicates those firms whose products were found reliable.

CHILD WELFARE

To those who are interested in advancing the welfare of children and anxious to spread a right conception among parents of the proper care that children should have in their early years of life, the *Child-Welfare Magazine* will be a welcome messenger of instruction and enlightenment. It is the official organ of the National Congress of Mothers, exceedingly neat and attractive in its make-up and filled with sane and safe advice and suggestions to mothers and all those who have charge of children. It is published at 227 South Sixth Street, Philadelphia, under the editorial management of five excellent women, including Dr. Helen C. Putnam, who are familiar with the problems to be met in the conservation of child life.

The Missouri Child Welfare Association will hold its meeting at Springfield, April 15 and 16. The Greene County Medical Society is taking an active part in preparing for this meeting and arrangements are being made for speakers from our association to deliver addresses at the meeting.

OBITUARY

J. B. THOMAS, M.D.

Dr. J. B. Thomas of Carthage, a graduate of the State University of Iowa Medical College, 1883, died recently, aged 55.

EPHRAIM MAGOON, M.D.

Dr. Ephraim Magoon of St. Louis died at the Mullanphy Hospital in that city December 29, after a month's struggle with death following a fall down a stairway that caused a fracture of the seventh cervical vertebra. He was born in Harmony, Me., in 1842, and had practiced medicine forty-nine years, the last twenty years in St. Louis.

WILLIAM WEBB, M.D.

Dr. William Webb, a graduate of the Jefferson Medical College, Philadelphia, 1849, died at his home in St. Louis January 21, aged 80, from senility. He was born in Hillsboro N. C., where his father, Dr. James W. Webb, practiced medi-

cine for many years. About five years before the Civil War Dr. Webb located in St. Louis, where he practiced until the call to arms induced him to join the ranks of the Southern Army in which he served as surgeon. He returned to St. Louis and continued his practice until his retirement a few years ago. He was always identified with the leaders in the profession, and when the Medical Society was formed he became an active worker and continued his affiliation until his retirement, at which time the St. Louis Medical Society placed him on the honor list.

NEWS NOTES

THE International Surgical Society will meet in New York in April.

DR. H. JERARD of Pleasant Hill, spent several weeks in Chicago attending postgraduate schools.

A NEW ordinance governing the milk supply of St. Louis was introduced in the assembly and will probably pass.

DR. JAMES N. LAWRENCE of Excelsior Springs, after a stay of six weeks in Chicago attending postgraduate schools, has returned home.

DR. FRANK A. LEE of Skidmore, a member of Nodaway County Medical Society, with his wife left for Honolulu for a vacation of several months.

THE State Board of Health revoked the license of Dr. Charles A. Hinson of Kahoka for one year from January, 1914. He took an appeal to the circuit court.

A MEDICAL library has been established in the city hospital in St. Louis for the use of the medical staffs and the medical officers and employees of the municipal hospitals.

DR. C. H. SHUTT, Hospital Commissioner of St. Louis, was married to Miss Alice Bock at St. Louis, January 22. The bride is a daughter of Dr. A. M. Bock of St. Louis.

THE Kansas City Skin and Cancer Hospital is a private institution recently established at Kansas City by Dr. Halsey M. Lyle, for the treatment of cancer and skin diseases.

THE bill to prohibit deceptive, false and misleading statements in advertising matter, has passed the City Council and will probably pass the House of Delegates of St. Louis.

DR. W. GLEN MILLER of Morrisville, a member of Polk County Medical Society, was married to Miss Edith Louise Dixon at the home of the bride's parents in Welsh, Okla., December 30.

A BILL to appropriate \$199,187 for the Infectious Disease Hospital in St. Louis has been introduced in the assembly. This is \$50,000 more than the hospital board had expected would be available for the purpose.

DR. W. M. WALLIS, SR., DR. K. C. CUMMINGS and DR. CHARLES T. BELL, all of Maryville, Nodaway County, have been appointed members of the pension board. They are all members of the Nodaway County Medical Society.

DR. W. R. HEWITT, chief surgeon United Railways, St. Louis, has resigned and departed for Europe where he will extend his medical studies during the next two years. No successor has been appointed to fill the position he vacated.

DRS. R. L. THOMPSON, E. L. OPIE and H. W. LOEB of St. Louis were guests at the exercises of the installation of Dr. Christian R. Holmes as Dean of the University of Cincinnati Medical College, January 16. Over fifty of the leading teachers of medicine were present.

BEN MYERS, a milkman of Kansas City, was fined \$25 for selling adulterated milk and suspended from business for thirty days. When asked why he watered his milk he replied, "I got a partner with me." We suspect a good many milk dealers are in partnership with H₂O.

OF the fifty-two interns to be appointed for service in the municipal hospitals of St. Louis in March, thirty-four must be graduates of St. Louis medical colleges, the hospital board having decided that two-thirds of the number to be appointed must be of the "home grown" variety.

THE Surgeons' Club of St. Louis held its first annual banquet January 21. Mr. Colin M. Selph, postmaster at St. Louis, was a guest and addressed the members on "Current Topics." Another guest was the Rev. Dr. George R. Dodson, who spoke on "The Physician in Old Greek Life." Dr. Francis Reder was toastmaster.

DR. H. L. WICHMANN of St. Louis, a member of the St. Louis Medical Society, was married to Miss Pearl MacCoy, January 3. The bride was secretary of the Republican State Committee at St. Louis for several years and later private secretary to his Honor H. W. Keil, the present mayor of the city. She is a distant relative of President Wilson.

THE Missouri State Board of Health elected officers at its January meeting as follows: President, Dr. F. H. Matthews, Liberty; vice-president, Dr. G. O. Cuppaidge, Moberly; secretary, Dr. J. A. B. Adcock, Jefferson City, re-elected. The next meeting will be held in St. Louis, February 9, 10 and 11 to examine applicants to practice in Missouri.

DR. GEORGE DOCK of St. Louis, was a guest of the Charaka Club, New York, at its annual dinner in January. He addressed the members on "The Medical Work of John Wesley a Picture of Eighteenth Century Medicine." The Charaka Club is composed of eminent medical workers and has perhaps the most valuable collection of works of medical interest in this country.

THE Board of Control of the Levering Hospital at Hannibal, has elected Miss Tooker to fill the position of superintendent of that hospital. For nine years Miss Tooker was superintendent of one of the principal hospitals at Springfield, Mo., and has been engaged in nursing for the past fifteen years. The retiring superintendent, Miss Mande Landis will assume charge of a hospital in Kansas City.

DR. R. P. C. WILSON of Platte City, has been elected superintendent of the State Colony for the Feeble-Minded at Marshall. Dr. Wilson is 38 years old and has been practicing for fourteen years. He is a graduate of the Emsworth Medical College of St. Joseph, Mo., and a member of the Platte County Medical Society of which he was secretary for several years. He will assume charge of the institution March 1.

THE bill requiring all dealers in food products to screen food stuffs, which passed the general assembly of St. Louis, was opposed by the Health Department, the St. Louis Medical Society and civic organizations because it exempted wholesalers and commission merchants. These merchants made a vigorous campaign for the passage of the bill. The mayor vetoed it, but the assembly passed it over his veto. The Health Department has begun prosecutions of wholesalers under the state law, which is drastic.

THE act passed by the Forty-Sixth General Assembly, 1911, providing for the establishment of district tuberculosis hospitals has been declared unconstitutional by the supreme court on account of the irregularity of the tax levy. The act was amended in the Forty-Seventh General Assembly, 1913, to overcome every fault.

Doubtless the next assembly will revise the law so that its humanitarian purposes may be consummated. Buchanan County had made considerable progress toward establishing a tuberculosis hospital district, but the decision of the supreme court stopped all efforts in that direction.

THE city of Chillicothe is to be congratulated for the splendid showing of its health department. At a recent meeting of the board of health with the city council it was shown that Chillicothe was free from contagious diseases with the exception of a few cases of typhoid fever. The citizens evidently are cooperating intelligently with the health board to prevent disease by keeping the streets and private premises in a sanitary condition. We cannot escape the conviction that the Livingston County Medical Society, which has always shown a commendable activity in all public health matters, has done its share in promoting this desirable condition in Chillicothe, which is the county seat and the largest city in the county.

THE people of Mexico, county seat of Audrain County, recently started an agitation to build a hospital in Mexico to meet the needs of the citizens of Mexico and adjacent territory. One hundred citizens subscribed \$3,000 as a maintenance fund and are the stockholders. A board of directors consisting of nine members was elected from these one hundred stockholders and incorporated under the name of the "Mexico Hospital Association" as a benevolent corporation. A large building, formerly used for hotel purposes, was leased, remodeled and fitted up for the use of the hospital. It contains a modern operating room, fifteen beds for patients, a thoroughly modern x-ray outfit, and a secondary operating room for examinations and minor surgical cases. The cost of fitting up the building and installing the equipment was about \$2,500, most of which was donated by individuals, firms, church societies, fraternal bodies and the public in general. Under the present by-laws, no physician, dentist or druggist can be a member of the board of directors; the only direct connection of the profession with the institution is the election by the Audrain County Medical Society of three members, who act in an advisory capacity to the board. This plan it is believed will promote harmonious cooperation with the physicians and throw the hospital open to all the physicians of the town and adjacent territory. It is the hope of the management that all will use it freely. The hospital is under the control of a superintendent, Miss Sarah H. Reitz, an experienced registered nurse, who is responsible to the board of directors.

MISCELLANY

THE RESIGNATION OF MR. LYONS

Mr. William E. Lyons, as the president of the health board, was the kind of public servant that Kansas City ought to have more of. And this means, unhappily, that he was the kind that it has been difficult to keep.

Whatever were the contributing causes to Mr. Lyons's resignation, this is clear: That with such a machine system of city administration as Kansas City has, there is no encouragement to men of his type to serve the city.

The competent and honest man in public place, where there is a machine regime, finds himself handicapped. He cannot put through his own policies. He is "checked and balanced." With no direct responsibility or power anywhere, he shares the general odium for tasks not done.

The best of Mr. Lyons's activities (such as his proffered help to the welfare board for decent housing) were the very activities that brought him into conflict with "the invisible government" of the politicians. If he had been content to be a nonentity he might have remained honest and still not have offended "the boys." But being honest and at the same time being an assertive personality was too much for the machine. Mr. Lyons was clearly out of place in a machine-ridden system of municipal administration.

Kansas City is now making for a new deal wherein the capable citizens who have character and who have public spirit will be enabled really to serve their city.—*Kansas City Times*.

"NO MAN CAN SERVE TWO MASTERS"

Similar phraseology of like meaning is found in every great religion and most philosophies. As usually applied, it is intended to point out that a man's influence is either for good or for evil, and a moral follows as the logical addendum.

However, it applies equally well to a man's work in any walk of life and any phase of voluntary action. In law, an attorney must represent one side only; in business, a man must be employed by one firm only, or act the part of a spy; in politics, he must be an adherent of one party only or remain a nonentity. Finally, and not without point, a man may have but one wife!

But, we are interested at this moment only in the phase of the subject as it applies to Eclectics being members of the A. M. A. Quite aside from the rightness or wrongness of the act, we, personally, have never been able to see how a man could hope to gain thereby. And, after watching

the erratic course of some who have tried it, we have become convinced that it is "bad business." Far be it from us to unduly restrain an Eclectic colleague from joining the A. M. A., and thus ally himself with it and its unholy policies, if he wants to do so; but we do think that before putting on the new uniform he ought to have the grace to discard the old. Certainly this would be the part of a man! Also permit us to commend it to those who feel thus inclined, for, as the fight warms up, there will be a close scrutiny of the souls of those who are in our camp. Abide with us, if you are with us, but, if you are against us, avant.

"No man can serve two masters."—*California Eclectic Medical Journal*.

THE STATUS OF THE CHIROPRACTIC IN TEXAS

As might have been expected, the court has ruled out the Chiropractic in this state. In November, 1903, one Lon Herrington, a graduate of the Chi- or Kiropractic College of Davenport, Iowa, was convicted in the county criminal court of Bexar County, of practicing medicine without a license and fined the sum of \$100 and one day in jail. That this was an important case may be judged from the fact that this most learned physician was defended by no less a person than Lieutenant-Governor Morris of Wisconsin, employed by the said Kiropractic College of Iowa. In addition to Gov. Morris, Judge R. H. Ward, a very able lawyer of San Antonio, was employed in the defense. The State of Texas, and it is said, the legislative committee of the Bexar County Medical Society, was ably represented in the trial by the county attorney, Mr. Dan Lewis and Mr. J. I. Kircheville, who has appeared in the rôle before. The result of this prosecution is most pleasing, of course, and other communities are strongly urged to take like action. An appeal will likely be taken, in which instance another clincher will be added to our most excellent medical practice act. We have Dr. Dixon and his committee, and attorney, to thank for this action.

We have before chronicled a number of convictions in San Antonio as a result of the activities of this committee, but the work goes so merrily on that we cannot refrain from referring to another one or two that have come to our notice. In October, Thomas Goldberg was convicted of practicing medicine illegally and fined \$200 and three months in jail, and a Mrs. E. B. Kimble was convicted at about the same time of the same offense, and given a verdict of \$50 fine and one day in jail.—*Texas State Jour. of Med.*

PIORKOWSKI LABORATORIES NOT LICENSED

Information has recently been received from various sources to the effect that, through agents and printed circulars, the statement is being circulated that the Bacteriol. physiolog. Institut (Piorkowski Laboratories), Berlin, Germany, has been licensed by the Treasury Department for the importation and sale in interstate traffic of "turtle tuberculin." These statements seem to emanate from so-called Piorkowski Laboratories, located, or represented as about to be located, in various cities in this country.

This statement is contrary to fact. After an inspection of the establishment by a representative of the Treasury Department and an examination of samples of the products at the Hygienic Laboratory of the Public Health Service, the Bacteriol. physiolog. Institut (Piorkowski Laboratories), Berlin, Germany, was refused a license by the Treasury Department for the importation and sale of their products in interstate traffic.

Under the act approved July 1, 1902, regulating the sale of viruses, serums, toxins, and analogous products in interstate traffic, such preparations applicable to the prevention and cure of diseases of man may be imported without license, provided they are not sold or intended for sale but for scientific experiments.

The above-mentioned act requires that each package of virus, serum, toxin, antitoxin, or analogous product must be plainly marked with the proper name of the article contained therein, and the name, address and license number of the manufacturer. Since this provision is strictly enforced, no difficulty should be experienced by anyone in determining whether a particular product has been propagated in a licensed establishment.

Persons or firms engaged in the sale of unlicensed products in interstate traffic are liable to a penalty consisting of a fine not exceeding \$500, imprisonment not exceeding one year, or both such fine and imprisonment in the discretion of the court.—*U. S. Public Health Reports*.

THE PRESENT STATUS OF THE CHIRO- PRACTORS IN KANSAS

The lay press has recorded the fact that Governor Hodges has so far refused to appoint the licensing board of chiropractors as provided by the bill passed by the last legislature. Inasmuch as the bill requires that the three chiropractors of the board shall have been in active practice of their profession two years previous to the appointment, this would mean that in order to qualify they must state under oath that they have done so contrary to the laws of Kansas. This places the governor in the position of being compelled to appoint "self-confessed violators of

the law" to offices intrusted with law enforcement—a questionable procedure to which the governor very rightfully refuses to be a party.

Accordingly the chiropractors have applied to the supreme court for an order of mandamus to compel the governor to appoint this board. The decision is awaited with interest. The governor has shown evidence of his friendliness to the medical profession. This was manifest by the fact that he alone probably saved the board of health and was a constant defender of all health laws that certain interests were determined to wreck. We believe he will postpone the appointment of the board as long as possible, should the decree be issued.

The attorney general has stated that the law is ambiguous and contradictory, and that any action taken by the governor under its wording is entirely optional. Should the governor remain firm in his determination not to appoint the board, Kansas may be treated to a situation rather novel. A similar one is cited when during the administration of Jefferson, United States Chief Justice Marshall rendered a decision that the president should perform a certain duty. Mr. Jefferson replied: "John Marshall has issued his decree; now let him enforce it."

In the meantime there is no question that all chiropractors that follow their profession (or trade, which?) do so contrary to law, and are open to prosecution. It is doubtful if even the present members of the legislature would re-enact the law, but a lower house is to be elected in November. Dr. Siever's paper printed in a recent issue of the *Journal* has a very apt heading, "What Are We Going to Do About It?"—*Jour. of Kansas State Med. Assn.*

A BLACKMAILING SCHEME

Down in Indiana a new blackmailing scheme has been worked on several unsuspecting physicians. First of all a letter is received of which the following is a copy:

..... 1913.
Dr.
..... Indiana.

Dear Doctor: You will no doubt be surprised to get this letter from a stranger, but oh, I am in such awful trouble that I must get help soon or I will go crazy.

I am in a family way, nearly two months gone, unmarried and deserted. That tells the whole miserable story in a few words.

I must get free at any cost, as I would much rather die than have it become known.

Won't you help me or tell me of some one you think would? If you will I will pay you well for it and be forever grateful to you for saving me from worse than death. Please do not be

angry with me for asking your aid. I could not bring myself to go to one I know, and I heard a lady from here say you were a good doctor. I feel sure that if you knew all the circumstances and how much this means to me you would not condemn me.

I can make an excuse to get away for a short time and if you can assist me in any way please let me know at once how much it will cost me and how soon I can act.

Kindly use plain envelope.

Sincerely yours,

Miss.....

.....

If the letter is answered, a young girl soon puts in an appearance, says the *Journal of the Indiana State Medical Association*, and no matter what attention is given her, her visit is followed some weeks later by the visit of a man who claims to be a relative of the girl, and who makes the statement that the girl has lost her life through the effects of an abortion, and that on her person was found the doctor's letter, professional card, etc. It is then made to appear that things look bad for the doctor, and that suit will be brought unless the matter can be settled out of court. Whether the doctor is guilty or not, he sometimes is weak enough to yield to the temptation to avoid notoriety, and pays the price that is asked for silence. The fact that several Indiana physicians have received the letter which we herewith reproduce, all of the letters being in the same handwriting, but sent from different towns and with different signatures, lends color to the supposition that a well-devised scheme of blackmailing is on foot, and members of the medical profession should be on their guard.

The receipt of a letter of this general character should at once arouse suspicion. It is astonishing that any physician should be willing to answer it. But the fact that several have done so in Indiana goes to show that we are still far from safe when our credulity and cheerful confidence in human nature are skilfully played on by some shrewd sharper.—*Wisconsin Medical Journal*.

SOCIETY PROCEEDINGS

ST. LOUIS MEDICAL SOCIETY

Three meetings were held during the month of December. The average attendance was 227. At these meetings eight papers were read. Among the essayists were Dr. R. C. Coffey of Portland, Ore., who read a paper entitled "The Mechanical Elements Concerned in Gastro-Intestinal Stasis," which aroused very deep interest.

The program of the meeting of December 20 was supplied by members of the Western Surgical Asso-

ciation. The speakers were: Dr. Dean Lewis of Chicago; Dr. Charles H. Mayo of Rochester, Minn.; Dr. James E. Moore of Minneapolis, Minn. The following out-of-town members of the Western Surgical Association attended: R. C. Coffey, Portland, Ore.; C. H. Mayo, Rochester; Carl B. Davis, Chicago; J. E. Moore, Minneapolis; M. L. Harris, Chicago; Robert A. Hanna, Peoria, Ill.; Clifford N. Collins, Peoria, Ill.; Emil G. Beck, Chicago; J. H. Fulgham, East St. Louis; William Hessert, Chicago; Joseph F. Smith, Wausau, Wis.; Paul Sorkness, Fargo, N. D.; E. P. Quain, Bismarck, N. D.; Frederic A. Besley, Herman E. Pearse, Kansas City, Mo.; Geo. M. Gray, Kansas City, Kan.; Chas. T. Souther, Cincinnati, O.; Wm. Yeaman Bainbridge, New York City; B. Merrill Picketts, Cincinnati, O.; Dean Lewis, Chicago; Allen B. Kanavel, Chicago; Arthur T. Mann, Minneapolis.

At the meeting of November 29, the secretary announced the election of the following officers: President, Dr. A. F. Koetter; first vice-president, Dr. A. E. Meisenbach; second vice-president, Dr. E. Lee Dorsett; secretary, Dr. F. C. E. Kuhlmann; councilors, Drs. Louis H. Behrens, Robt. E. Schlueter, M. A. Bliss, C. E. Burford; delegates, Drs. Wm. T. Coughlin, Walter Baumgarten, Joseph Grindon, R. E. Schlueter, M. A. Bliss, Louis H. Behrens, Percy Swahlen, M. B. Clopton, C. E. Burford and Wm. Engelbach.

At the meeting of December 6, by unanimous vote of the society the offer of the St. Louis Medical Library Association to transfer all its property—library and real estate, to the St. Louis Medical Society, was accepted. By this action the entire assets of the medical library became the property of the St. Louis Medical Society.

At this meeting there was read a letter of condolence on the death of Dr. Jesse S. Myer, from the Medical Society of the County of Clinton, of the state of New York.

During the month of December six applicants were elected to active membership, viz.: Dr. James J. Barry, Dr. George E. Hourn, Dr. Joseph W. Larimore, Dr. Richard J. Payne, Dr. Maurice J. Press, Dr. Orra L. Rutherford. Dr. Albert B. McQuillan was elected a corresponding member and Dr. Robert C. Coffey an honorary member.

The society starts the new year with the added advantage of having a magnificent medical library and being housed in its own property.

RICHARD S. WEISS, M.D., Asst. Sec'y.

Annual Meeting, January 3, 1914

As usual during the holidays no meetings of the society were held. The annual meeting took place on Jan. 3, 1914. The retiring president, Dr. Louis H. Behrens, addressed the society as follows:

If anything has been proven, in the work of 1913, it is that the life of our society is dependent on the good work of our Program Committee. I need but call attention to our secretary's annual report to attest the fact that the attraction for the large attendance during the year was due to that committee's arrangement and thoroughness.

Our publication, *The Bulletin*, has been conducted most satisfactorily; under the most excellent guidance of a splendid Committee on Publication. Trials and tribulations have not daunted them, and the most satisfactory year, financially and as a publication, belongs to the 1913 committee.

Our Membership Committee has been exacting and thorough. It is no small task to select the worthy out of ninety or more applicants. We need but to visit the Council, and hear their reports on candidates to appreciate the searching labor done to select those who are to be members. Quality and not quantity has been their slogan.

The Public Health and Instruction Committee have been ever on the alert, and have taken a keen interest

and an unflinching stand on laws inimical to public health.

Also the Committee on Ethics has done an immense amount of work in a special unostentatious manner, important and serious ethical breaches have been settled satisfactorily to all concerned in Executive Committee sessions, and problems that too often receive too prominent airing when brought to the general society for action, has been rightly held in abeyance by this committee.

The Committee on Necrology is composed of most willing workers, pleased to say not overworked, and kindly disposed gentlemen enough not to be desiring work.

Of the remaining several special and lesser committees, all have unstintingly given their best efforts and work when same was demanded.

We can feel that all of our workers have done most excellently, and our appreciation as members is more than the mere word "thanks."

I desire to say that the year 1913 would not be one of our best if it depended on your presiding officer, but the harmony of the society membership, the appreciative attendance, the work of our several committees have made it so, and I thank one and all for the privilege that has been mine to have served as your president during the year just past.

So, Mr. President and the officers of 1914, we leave you as an heritage a harmonious society, growing stronger and larger—the St. Louis Medical Society—free of debt except the recent library obligations, a splendid medical library, the liberal Bartscher fund, which in due time will be ours, and above all, our hearty and best wishes.

The president-elect, Dr. Albert F. Koetter, was called to the chair and took the gavel and addressed the society as follows:

Mr. President, Ladies and Members of the St. Louis Medical Society:—You have elected me to the office of president of your society for the ensuing year. I wish to express my sincere appreciation for the honor conferred upon me.

As with my predecessors, the success of my administration will depend in a great measure on the Program Committee. The high standard of scientific work established by the committee of 1913 should be an added stimulus to the new committee for further improvement. Criticism, not of the committee, should be directed at the members of the society for the lack of discussion of the papers presented before it. An active discussion brings out the salient points of a paper, and is at the same time a compliment for the efforts of the essayist.

The Publication Committee reports for the first time in its history a surplus for *The Bulletin*, due no doubt, to its strenuous efforts in soliciting advertising. I look forward to the time, which I hope is near at hand, when *The Bulletin* can be published without advertising matter. It is undignified to expect members of the committee to solicit advertisements for its columns.

An increase in the membership of the society is greatly to be desired, and perhaps a revival of the Civic Section would be an aid to that end, but it should always be remembered that the St. Louis Medical Society should stand for quality and not quantity as regards its membership. The union of the Medical Library with the St. Louis Medical Society is an additional advantage to membership in the society.

The social features of the society have been neglected, and I believe such meetings, not necessarily scientific, should be held at intervals to allow members to become better acquainted, and stimulate a feeling of good fellowship among them.

I thank you again for the confidence placed in me and ask the cooperation of every member of the society

to make the year 1914 the most successful in its history.

During this meeting the various committees and officers of the society made their reports which were all accepted. After the meeting the society adjourned to the parlor where a reception was tendered to the various ex-presidents. The attendance was 300, of which more than 100 were ladies.

Meeting of January 10

There was a meeting of the society Jan. 10, 1914. The scientific program of this meeting consisted of a symposium on laboratory aids to diagnosis. The various speakers told about the latest methods in the examination of blood, urine, stomach and feces, bacteriology and serology. The following resolutions were unanimously adopted:

WHEREAS, The Municipal Assembly of the city of St. Louis has just passed House Bill No. 6, amending the so-called fly-screening ordinance exempting all wholesalers and commission merchants from the necessity of screening their foodstuffs against flies; and

WHEREAS, This bill is now before Mayor Kiel for his action; and

WHEREAS, The health of the city of St. Louis will be seriously affected by failure to protect foodstuffs against infection by flies while in the hands of wholesalers and commission merchants; therefore be it

Resolved, By the St. Louis Medical Society that the Honorable Henry W. Kiel, mayor of St. Louis, be urgently requested to veto this bill in the interest of the health of our city.

Dr. Kane said:

"Every progressive city in the world to-day and every sanitarium has taken the position that food must be protected from flies in order to prevent the transmission of disease. There is no justification in exempting the wholesalers and commission merchants from the provisions of the law, which all retailers are bound to observe.

"It is a solemn farce to pass legislation screening food in the hands of the retailer and yet allowing it to be exposed to flies previously in the hands of the wholesaler. This is no protection whatever to the community. If St. Louis is to keep her place among the healthiest of American cities, we must count clean food among the first of our guarantees to our citizens."

The attendance was 156.

At the annual meeting of the council, Jan. 14, 1914, Dr. L. J. Kilian was elected to membership. Dr. J. W. Marchildon was reelected as treasurer for the ensuing year. The president announced the appointment of Dr. A. H. Hamel as counselor in place of Dr. Robert E. Schluter, resigned, and Dr. P. J. Hurford in place of Dr. Louis H. Behrens.

Meeting of January 17

The meeting was called to order at 8:45 p. m. by the president, Dr. Albert F. Koetter.

The scientific program consisted of the following:

Dr. E. P. Buddy read a paper entitled "Cervical Rib," with presentation of case and illustrated with x-ray plates.

Discussion being opened by Dr. Carroll Smith, Dr. Buddy closing.

Dr. Major G. Seelig read a paper entitled "The Inguinal Route Operation for Femoral Hernia," illustrated with lantern slides.

Discussion by Drs. Louis Rassieur, Reder and Sharpe, Dr. Seelig closing.

Dr. F. M. Barnes, Jr., read a paper entitled "The Recognition of the Feeble-minded."

Discussion by Drs. M. A. Bliss, C. G. Chaddock, P. C. Scholz, Dr. Barnes closing.

Dr. A. E. Meisenbach demonstrated a specimen of Hydronephrosis.

Dr. Frank J. Lutz addressed the society as follows:

"You understand, gentlemen, without any lengthy discussion, that much of the general work which is being done by the government in connection with the pure food and drugs and the stopping of quacks and quackery, has been done at the instigation primarily by the medical profession. We have yearly opportunely and sometimes inopportunely read the supervision of these affairs on the part of the government. It is not being done in such a way as to utilize a special result and the medical profession of this country I think should record its approval of these various activities on the part of the government and bring these matters before the society. I have therefore the following resolution to offer":

WHEREAS, The postoffice department of the national government is protecting the people from the fraudulent practices of unscrupulous and dishonest persons, and particularly the sick and afflicted from quacks and impostors, by denying the use of the mails to swindlers and fakers, and

WHEREAS, Such effort should have the support and approval of all good citizens and especially the reputable members of the medical profession, that they express their approval and appreciation of such laudable activities on the part of the national government, therefore be it

Resolved, That the St. Louis Medical Society does hereby express to the Hon. A. F. Burlison, postmaster general, its approval of the stand he has taken against allowing the use of the mails to persons who have been found to practice fraud and deceit upon the people and especially upon the sick and afflicted, who are so often the victims of the lying and deceitful practices and promises of swindlers and fakers in the medical field. Be it further

Resolved, That these resolutions be spread upon the minutes of the St. Louis Medical Society and a copy sent to the Honorable Postmaster General.

These resolutions were on motion unanimously adopted and the secretary instructed to forward a copy to the Hon. A. F. Burlison, postmaster general, and the Hon. Colin M. Selph, postmaster at St. Louis, Mo.

Dr. Lutz further offered the following resolutions:

WHEREAS, The department of agriculture has established a bureau for the dissemination of information concerning the foods and drugs consumed by the citizens of this country and sends notices of adulterated and impure foods and drugs to the press and to the people, and is prosecuting patent medicine manufacturers who make unreasonable claims for their remedies for violation of the pure food and drug law, and

WHEREAS, The establishment of such a bureau and such prosecution are forceful governmental aids in protecting the health of the people, therefore be it

Resolved, That the St. Louis Medical Society indorses this bureau of information and expresses its approval and appreciation of the enlarged activities of the department of agriculture under the direction of the Hon. David F. Houston, secretary of agriculture, and be it further

Resolved, That these resolutions be spread upon the minutes of the St. Louis Medical Society and a copy sent to the Honorable Secretary of Agriculture.

These resolutions were on motion unanimously adopted and a copy ordered sent to the Honorable David B. Houston the secretary of agriculture.

Dr. R. Emmet Kane called the society's attention to the campaign against quacks and charlatans by the *New St. Louis Star* and offered the following resolutions:

WHEREAS, The *St. Louis Star* has exposed the fraudulent and deceptive practices of advertising quacks practicing medicine in St. Louis and

WHEREAS, This exposure will prevent the further sacrifice of health and life to the avarice of these unscrupulous practitioners and

WHEREAS, This work deserves the commendation and support of all good citizens; therefore be it

Resolved, That the St. Louis Medical Society commend the *St. Louis Star* for undertaking this unselfish work in the interest of the health and morals of the people; and be it further

Resolved, That the St. Louis Medical Society place the services of its members at the disposal of the *St. Louis Star* in any manner that may serve the best interests of the public health; and be it further

Resolved, That a committee of twelve be appointed by the president to arrange for a mass meeting of citizens at our building next Friday evening to arouse the people to a proper understanding of the menace of quackery.

(Signed) R. EMMET KANE,
E. J. GOODWIN,
E. J. SCHISLER.

On motion these resolutions were unanimously adopted and the president appointed the following committee to arrange for the mass meeting:

Dr. F. J. Lutz, Dr. R. E. Kane, C. H. Neilson, George Dock, Mary H. McLean, E. J. Schisler, Robert M. Funkhouser, A. E. Meisenbach, A. H. Hamel, Louis H. Behrens, Joseph Grindon and Robert E. Schlueter.

Dr. Kane also called attention to a bill introduced in the House of Delegates prohibiting publication of misleading advertisements and offered the following resolutions:

Resolved, That the St. Louis Medical Society indorses the bill introduced in the House of Delegates by Honorable B. L. Schwarz of the Twenty-Fifth ward to prohibit the publication of misleading advertisements in St. Louis.

(Signed) R. EMMET KANE,
E. J. GOODWIN,
E. J. SCHISLER.

On motion these resolutions were adopted and the secretary instructed to send a copy to the Honorable B. L. Schwarz.

It was moved and seconded that the secretary be requested to send a copy of all the above resolutions to the *New St. Louis Star* for publication. Unanimously carried.

The president, Dr. Koetter, said he had been asked by quite a number of the members for an explanation of the statement on the bills for membership dues that payment of dues included membership in the American Medical Association of the Missouri State Medical Association to inform the members upon that point.

Dr. Goodwin: At the meeting of the American Medical Association in Minneapolis in June, 1913, the by-laws were changed to read that the membership of the American Medical Association "shall consist of the members in its constituent State Associations." Previously the by-law read that the membership of the American Medical Association "shall consist of such members of the constituent associations as make application in accordance with the by-laws." It is, therefore, plain that previous to 1913 the membership of the American Medical Association was restricted to a small number of the members of the county and state association. The change was made so that all members of the county and state societies shall be identified with the entire organization—the county, the state, and the American Medical Association. Thus the entire organized profession is made one cohesive unit and every member of every state and county society is likewise a member of the American Medical Association

without having to pay any other dues for such distinction than the amount required in his county society.

All members of the County Societies are represented in the American Medical Association by the state delegates to that body which are elected by the entire state association membership.

There is, however, another body of men called Fellows of the American Medical Association, who pay for the privilege of participating in the annual gatherings of that body and receive the *Journal of the American Medical Association*. These are the ones who formerly were designated members of the American Medical Association. As it now stands every physician who is affiliated with the organization is a member of the organization and is legally acknowledged as such. If he wishes the further privilege of having the principal publication of the organization, namely, the *Journal of the American Medical Association*, and desires to participate in the proceedings of that body he must then make application for fellowship and subscribe for the *Journal*. However, only members are eligible to Fellowship.

The recent raise in dues of the St. Louis Medical Society and the State Medical Association has nothing whatever to do with the membership. The raise in dues is for the purpose of meeting the obligations and carrying on the work of the State Association and the St. Louis Medical Society. It was found impossible to continue our numerous efforts to improve the standard of practice in St. Louis and throughout the state and to protect the members from suit for malpractice upon the meager sum of \$2, so that the state dues were raised to \$3.

In the St. Louis Medical Society the recent acquisition of the medical library and the enlarged activities of the society demanded an increase in the dues. In addition to the expense connected with different members against malpractice suits, much of the activities of the State Medical Association are directed toward protecting the profession from the encroachment of pseudo-medical persons in obtaining legislation to legalize their attempts to tamper with the health of the people.

After some discussion this explanation was ordered published in the *Bulletin*.

Attendance 132.

Mass Meeting, January 23

Subject of the meeting: Quacks and quackery.

The meeting was called to order at 8:30 p. m. by the president, Dr. A. F. Koetter.

The president after a few introductory remarks on the evils of quackery read congratulatory telegrams addressed to the *New St. Louis Star* from the following gentlemen:

Dr. J. A. Witherspoon, president of the American Medical Association.

Dr. Victor C. Vaughn, president-elect of the American Medical Association.

Dr. George H. Simmons, editor and general manager of the *Journal of the American Medical Association*.

Dr. E. H. Miller, president of the Missouri State Medical Association.

Mr. Norman Hapgood, editor of *Harper's Weekly*.

Dr. Frank J. Lutz read a paper entitled, "The Attitude of the Profession Toward the Quack and Quackery," with lantern slides.

The Rev. Joseph Lubeley of Holy Trinity Catholic church read a paper entitled "The Moral Aspects of Quackery."

The Rev. Z. B. Phillips spoke on "The Cruelty of Quackery."

Mr. Charles Stix read a paper entitled "Effects of Quack Advertising on Legitimate Business."

Dr. Robert M. Funkhouser spoke on the subject, "Why Does the Quack Exist?"

Dr. Max Starkloff spoke on the subject of "The Baneful Influence of the Quack."

Mr. Howard Sidener spoke on the subject of "Prosecuting the Quack."

Mr. Percival Chubb spoke on the subject, "Ethical Standards of Advertising."

Dr. R. Emmet Kane offered the following resolutions:

This mass meeting endorses the work undertaken by the *New St. Louis Star* in exposing the nefarious practices of advertising practitioners. We pledge our support to it and to the federal, state and city governments in bringing to justice those who prey upon the unfortunate and the afflicted. This was seconded and unanimously carried. Estimated attendance 600.

Meeting of January 24

The meeting was called to order by the president, Dr. A. F. Koetter, at 8:55 p. m.

The scientific program consisted of clinical demonstrations.

Dr. A. E. Horwitz presented a case of "Lumbar Spondylitis following Repeating Lumbar Punctures."

Discussed by Drs. Lipsitz, Tanquary, Meisenbach and closed by Dr. Horwitz.

Dr. L. H. Behrens presented a case of "Mitral Stenosis," with unusual features.

Discussed by Drs. Hermann, Boisliniere, and closed by Dr. Behrens.

Dr. C. F. Pfingsten presented a case of "Menier's Disease."

Discussed by Dr. O. H. Brown.

Dr. Ralph Kinsella presented a case of "Pernicious Anemia."

Discussed by Drs. Behrens, Dock, Lipsitz, Meisenbach, and closed by Dr. Kinsella.

Dr. R. Emmet Kane reported for the special committee appointed to arrange for last Friday's mass meeting as follows:

In the absence of Dr. Lutz I would like to report that your committee arranged for the mass meeting which was held in this hall last evening and I feel certain all those interested in the work of making St. Louis a cleaner city will feel that the society did a splendid thing in lending its active aid to the *New St. Louis Star* in driving quacks out of the city and in awakening the other newspapers to a realization that St. Louis does not want any filthy medical advertising in the journals which enter the homes of its citizens. For the benefit of those who were not here, I wish to report that about five hundred people were packed in this auditorium and one hundred and fifty or two hundred more in other rooms of the building. In spite of the inclement weather it is estimated that about fifteen hundred who came after 7:45 were unable to get into the hall. The committee had no difficulty whatever in getting speakers representing the highest in our intellectual and business life to address the meeting. Three members of this society, Drs. Koetter, Lutz and Funkhouser addressed the gathering and their reward is the knowledge that they did their duty splendidly and well. I feel that the society can never fully repay those outside its ranks who so willingly helped us in our work. Our gratitude in a special way should be expressed to the *New St. Louis Star* and to Mr. Frank W. Taylor, Jr., its city editor, for the publicity they gave our meeting and the active assistance they gave us in making our gathering a glorious success.

Representing Archbishop Glennon, who expressed his regret that he could not attend in person, Rev. Joseph Lubeley of Holy Trinity Catholic church, splendidly set forth the dishonesty and immorality underlying quack medical practice. Dr. Zeb T. Phillips, pastor of St. Peter's Episcopal church, one of the most scholarly orators St. Louis has ever claimed, addressed the gathering in a manner that none of us will ever be able to forget. He set forth the cruelty underlying dishonest medical practices, and made us all feel the

grave responsibility which medical men hold for all suffering humanity. Our health commissioner, Dr. Max Starkloff, set forth as only this splendid citizen can, the wonderful work which our health department is doing toward making St. Louis the healthiest city in the world for decent citizens, and the most unhealthy for those who practice medicine in violation of our medical practice act and our criminal code. Mr. Percival Chubb, president of the Ethical Culture Society, backing up all those things said by Dr. Phillips and Father Lubeley, gave us every assurance that his activities will not cease with this meeting in awakening the public conscience to a realization of the menace quackery is to good citizenship. Mr. Charles A. Stix, representing the Civic League and Retail Business Men's Association, assured us that the powerful machinery of his organizations, as well as his personal energy, are at the command of reputable medical men at any time they can serve us in driving quacks out of the city and misleading and dishonest advertising from our newspapers. Mr. Howard Sidener, in closing the meeting, promised the society that the prosecuting attorney's office will enter actively into the work of landing medical charlatans in the work house or penitentiary and he urged the society and its members to use his office in any way that will aid in the successful accomplishment of our objects.

The committee feels that its work was only partly accomplished in arranging for the mass meeting. It suggests that it be continued indefinitely with instructions that it cooperate with the newspapers and the various organizations with influence in our city in cleaning up our local medical and advertising situations. That this is not a hopeless task will be evident to those of you who have noticed that probably for the first time in its history St. Louis has not a single paper on its streets to-day carrying advertisements of local quacks who profess ability to cure the so-called social diseases.

I want to call the attention of the members to the duty they owe to the *New St. Louis Star* in assisting it in the prosecution of those cases which are brought before the bar of justice. I hope no member of this society will offer any excuse for his absence from court when the committee requests him to give testimony in cases which are up for trial.

Moved and seconded that the secretary write a letter of thanks to the speakers at the mass meeting of Friday, January 3. Motion carried.

Moved and seconded that the special committee to arrange for the mass meeting be continued indefinitely. Motion carried.

Moved and seconded that the secretary be instructed to send a letter of thanks to Mr. F. W. Taylor, city editor of the *New St. Louis Star* and the *New St. Louis Star* for their able assistance at the mass meeting of Friday, January 23. Motion carried. Attendance eighty-one.

R. S. WEISS, M.D., Assistant Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met at Hamilton January 15, with the following members present: F. W. Scanlon of Polo; W. T. Lindley, Tinsley Brown and W. M. Duffie of Hamilton; R. L. Mount and E. F. Higdon of Polo; S. T. Smith of Cowgill; J. E. Gartside of Kingston; J. A. Waterman of Breckenridge.

Dr. E. F. Higdon of Polo was received by transfer from the Ray County Medical Society.

The following officers were elected for 1914: President, Tinsley Brown, Hamilton; vice-president, Robert L. Mount, Polo; secretary-treasurer, James A. Waterman, Breckenridge; delegate, James A. Waterman, Breckenridge; alternate, James E. Gartside, Kingston.

The next meeting will be held at Kingston on April 16. J. A. WATERMAN, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The December meeting of the Cape Girardeau County Medical Society met in regular session. The meeting was devoted entirely to the election of officers for 1914 and a business discussion.

The following officers were elected: President, W. K. Statler, Oak Ridge; vice-president, G. W. Tarlton; secretary, W. E. Yount; treasurer, W. N. Howard; censor, W. L. Cunningham; delegate to the State Medical Association, W. N. Howard; A. M. A. committeeman, R. F. Wichterich, all of Cape Girardeau.

The newly elected president appointed the following program committee for the year: Drs. E. H. G. Wilson, G. B. Schulz and W. E. Yount.

At our January meeting we had no formal papers, but some interesting reports were given on postgraduate experiences by Drs. Schulz and Wichterich.

I think the prospects for better work in the society this year are good. We hope for improvement and renewed interest.

W. E. YOUNT, M.D., Secretary.

CEDAR COUNTY MEDICAL SOCIETY

At the December meeting of the Cedar County Medical Society the following officers were elected for 1914: President, Kimball Hill; vice-president, J. R. Williams, El Dorado Springs; secretary-treasurer, E. H. Liston, Cedar Springs; delegate, L. T. Dunaway; alternate, R. O. Crawford, El Dorado Springs; board of censors, W. P. Royston, I. F. Marquis and R. B. Marr. Dr. R. O. Crawford was selected as county committeeman on health and public instruction to serve on the state committee.

Dr. E. S. Smith was endorsed for the position of county physician.

A general good feeling prevails in this society and the meetings are made beneficial by the report and study of intricate cases. Among the very interesting cases at this meeting was an account of a hemophilia by Drs. Royston and Dunaway.

E. H. LISTON, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

The Daviess County Medical Society held its regular meeting at Jamesport on Tuesday, Dec. 9, 1913. The Jamesport members, Drs. Thompson, Claggett and Harris entertained us at a dinner, after which the meeting was called to order by the president. The minutes of the previous meeting were read by the secretary and approved.

The following officers were elected for the year 1914: President, N. M. Wetzel; first vice-president, R. V. Thompson; second vice-president, F. V. Frazier; secretary-treasurer, M. A. Smith; reporter, Davill Harris; delegate to State Association, W. L. Brosius; alternate, R. V. Thompson. Committees were appointed as follows: Program and scientific work, N. M. Wetzel, M. A. Smith, R. V. Thompson and F. V. Frazier; board of censors, D. F. Hanna, A. G. Minnick and Frank Hedges; public health and legislation, J. D. Dunham, L. R. Doolin and Davill Harris.

Dr. Jacob Geiger of St. Joseph presented a paper on "Modern Surgical Considerations and Technique." The paper showed a very careful study of the subject and the doctor gave it in a strong, plain, but forcible way. Many questions were asked by the doctors, which were ably answered and discussed.

Dr. W. Jackson Miller of St. Louis then delivered a very instructive address on the subject of "Ectopic Gestation." This address was a very interesting one and ably handled by Dr. Miller. It was thoroughly digested by all the doctors present.

From the reports of the different committees and the renewed interest taken by the members our county society promises to do greater things the coming year.

The members present were: M. A. Smith, D. F. Hanna, F. V. Frazier, A. G. Minnick, N. M. Wetzel, R. V. Thompson, O. F. Claggett and Davill Harris. The visiting physicians were Drs. Jacob Geiger of St. Joseph, W. Jackson Miller of St. Louis, Dr. Griffith of Gallatin, and Dr. Metz of Altamont.

The next meeting will be held at Gallatin, which will be fully announced later.

N. M. WETZEL, M.D., Secretary.

NEWTON COUNTY MEDICAL SOCIETY

The Newton County Medical Society is in very good condition. The members have not all paid the state dues, but I think they will do so soon. We had a good January meeting; some good case reports and papers. We hope to have something good to report to THE JOURNAL every month.

HORACE BOWERS, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met in the Commercial Club rooms at Moberly, January 26, at 2 p. m.

Members present were Drs. C. B. Clapp, G. O. Cuppidge, W. K. Megee, S. P. Towles, L. A. Bazan, J. P. Allen, C. A. Orr, F. O. Blattner and E. W. Shrader.

Officers for 1914 were elected as follows: President, J. P. Allen; vice-president, S. P. Towles; secretary-treasurer, E. W. Shrader; censor, D. A. Barnhart; delegate to the state meeting, C. B. Clapp; alternate, R. A. Woods.

The society adjourned to meet again Thursday, Feb. 12, at 2 p. m.

E. W. SHRADER, M.D., Secretary.

SCOTLAND COUNTY MEDICAL SOCIETY

The Scotland County Medical Society held its regular meeting in the office of the secretary in Memphis, January 13. Owing to the condition of the roads and weather we held no meeting in December.

In the absence of the president and vice-president, Dr. Foster was chosen as chairman of the meeting. There was no regular program so the society proceeded to elect officers for 1914, which resulted as follows: President, H. C. Finch, Hitt; vice-president, A. L. Davis, Arbela; secretary-treasurer, E. E. Parrish, Memphis.

The society entered into a general discussion concerning the work of the society for the year. We have held several public meetings over the county in the last two years and we intend to start up the good work again this year.

The society adjourned to meet February 10.

E. E. PARRISH, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met at Sikeston, in the office of Dr. L. O. Rodes. The following members were present: Drs. Westcoat, Rodes, Milem, Malcolm and Miller. Visitors: Drs. A. A. Mayfield and W. S. Hutton.

Dr. A. A. Mayfield of Sikeston was admitted to membership on application, and Dr. W. S. Hutton of Fornfelt was admitted to membership by transfer from St. Francois County Medical Society.

The following officers were elected for 1914: President, L. O. Rodes, Sikeston; vice-president, J. A. Milem, Sikeston; secretary-treasurer, G. S. Cannon, Fornfelt; delegate, G. S. Cannon; alternate, J. A. Milem.

Adjourned to meet the first Monday in April at Oran, Mo.

G. S. CANNON, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, January 7. President A. L. Gray in the chair; thirty-eight members present. The minutes of the previous meeting were read and approved.

Dr. A. L. Gray delivered the annual address of the retiring president and then introduced the newly elected president for 1914, Dr. J. J. Bansbach, who thereupon presided.

The following standing committees were announced by the president: Executive—Dr. A. L. Gray, O. G. Gleaves, Geo. Boteler; Public Health and Legislation—Drs. F. L. Ladd, L. A. Todd, A. E. Holley; Program—Drs. J. F. Owens, C. W. Fassett, Caryl Potter; Library—Drs. J. I. Byrne, T. J. Lynch, F. X. Hartigan; Medical Service—Drs. Daniel Morton, O. B. Campbell, E. S. Ballard; Membership—Drs. J. T. Stamey, L. Bauman, C. S. Branson; Tuberculosis—Drs. O. C. Gebhart, W. H. Minton, M. S. Gray; Laboratory—Drs. W. L. Kenney, J. W. Ferguson, W. J. McGill, G. A. Reutter, G. R. Stevenson.

At the suggestion of Dr. D. Morton, the secretary was instructed to write Dr. E. J. Goodwin and ascertain for what reason the dues for 1914 were advanced one dollar.

The secretary was instructed to prepare the following amendment to our constitution and by-laws:

Article 6 of the constitution to read: Funds for meeting the expenses of the society shall be raised by annual dues and voluntary contributions. The annual dues shall be six dollars per year.

Section 1, Chapter 5 of the by-laws to read: Admission fee must accompany application and shall be six dollars, which shall include the annual dues for the fiscal year. The admission fee shall be returned if the applicant is not accepted.

Section 2, Chapter 5.—The annual dues shall be six dollars and shall be payable January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held as suspended without action on the part of the society. A member suspended for non-payment of dues shall be restored to full membership on payment of all indebtedness. Members more than one year in arrears shall be dropped from the roll of members and so notified.

All three of the above amendments have been changed to read six dollars (\$6.00) in place of five dollars (\$5.00).

Dr. Caryl Potter and Dr. W. Martin of Savannah, Mo., presented a clinical case of "Cervical Rib."

Judge Randolph having been invited to attend this meeting, was called upon to address the society relative to the prosecution of quack and advertising doctors; also in regard to having this society incorporated. The Public Health and Legislation Committee was instructed to confer with Judge Randolph and report at the next regular meeting.

On motion of Dr. Gray, seconded by Dr. Morton, a resolution was adopted that this society be regularly incorporated under the laws of the state of Missouri.

Dr. C. I. Tucker was unanimously elected to membership.

The application of Dr. J. H. Peck of Chillicothe, Mo., was deferred and the secretary instructed to write Dr. Goodwin for instructions.

The resignation of Dr. J. A. Hansler and Dr. M. S. Gray as lodge physicians to the Loyal Order of Moose was reported by the secretary of the above order.

A communication from the Commerce Club of our city, requesting this society to take out one or more memberships, was read and after discussion, on motion of Dr. A. L. Gray, seconded by Dr. P. I. Leonard, it

was decided that this society take out one membership in the above named organization.

A communication was read from Mr. Rush, city librarian, informing this society that the annual subscription for purchasing medical publications had expired and requesting a renewal. On motion of Dr. Caryl Potter, seconded by Dr. Daniel Morton, the sum of \$75 from the funds in the hands of the treasurer was set aside for this purpose.

The board of health through their secretary requested permission to publish a report of contagious diseases in the Society Bulletin, showing a summary for each fortnight, including total number of cases reported, number released and number remaining under quarantine. This permission was granted.

The report of the treasurer for the year 1913 was read, showing a balance of one hundred eighty-six dollars and twenty-one cents (\$186.21) to the credit of this society in the First National Bank of Buchanan county.

The secretary's report was read and both reports were ordered spread on the minutes of the meeting.
W. F. GOETZE, M.D., Secretary.

Meeting of January 21

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, January 21. President J. J. Bansbach in the chair; twenty-eight members present.

The Public Health and Legislative Committee through Dr. Ladd reported having conferred with Judge Randolph and that they expected to present the articles of incorporation at the next regular meeting.

The banquet committee presented its final report, which was accepted and the committee discharged.

On motion of Dr. Ladd, seconded by Dr. Elam, the secretary was instructed to write to the State Anatomical Board with a view of obtaining bodies for scientific purposes to be placed at the disposal of individual doctors of this society.

The application of Dr. J. W. Connard was read and referred to the board of censors.

The proposed amendment to the constitution and by-laws as published in our Bulletin under date of February 2 received the first reading.

A Mr. Cole, manager of the Neal Institute of this city, was given the privilege of the floor and addressed the society on behalf of the above institute. On motion of Dr. C. Geiger, seconded by Dr. Holley, this institute was condemned as being unethical and that any member treating a patient at this institute in the future is to be reported to the board of censors. The Committee on Public Health and Legislation was instructed to make an investigation of the Neal Institute and report their findings at our next regular meeting.

Dr. Caryl Potter verified the diagnosis of "Cervical Rib" in connection with the clinical case exhibited at our previous meeting.

A very interesting paper was read by Dr. H. Lee, subject: "The Relation of Atmospheric Air to Tuberculosis," and was discussed by the following members: Drs. Owens, Holley, Leonard, Chas. Geiger, Caryl Potter and Spencer. The discussion was closed by Dr. Lee.

W. F. GOETZE, M.D., Secretary.

VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in regular session in the court house at Nevada, Dec. 11, 1913. Those present were Doctors Petty, Hornbaek, Wilson, Dulin, Williams, Yater, Craig, Brown and others of Nevada; also Dr. Walker of Harwood, and Dr. Davis

of Walker. The society was very fortunate in having Dr. F. W. Bailey of St. Louis, who read a very interesting paper on goiter, and Dr. H. Unterberg of St. Louis, who talked along the lines of diseases of the nervous system; Dr. Howard Hill of Kansas City gave a fine address on gall-stones, illustrated by diagrams.

This being the meeting for the election of officers for the ensuing year, the following were elected: President, Dr. E. A. Dulin, Nevada; vice-president, Dr. C. B. Davis, Walker; secretary, Dr. J. T. Hornback, Nevada; censor, Dr. G. S. Walker, Harwood; delegate to the State Medical Society, Dr. G. W. Petty, Nevada.

After discussing the various phases of appendicitis and other diseases the society adjourned until the meeting in March next.

After adjournment the society enjoyed an elaborate banquet at Smith's cafe, which was highly appreciated by the doctors.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in regular session at Rogersville, Dec. 17, 1913. The meeting was called to order by Dr. John R. Bruce, who was elected president pro tem. Drs. Atkins, Sayers, McHaffie, Rabenau, Good, Highfill, Beatie and Bruce were present. Dr. R. W. E. Cole, formerly of the U. S. Coast Survey, was present as a guest.

The minutes of the last meeting were read and approved. The treasurer's report was read and approved.

The application of Dr. Geo. D. Wells of Marshfield being reported on favorably by the board of censors, was elected to membership in our society. The resignation of Dr. W. H. Bollinger of Seymour was read and accepted. Dr. M. Highfill was elected to serve as committeeman on public health education for our society.

The following officers were then elected to hold office for 1914: President, Dr. J. W. Good of Fordland; vice-president, Dr. W. A. Atkins; secretary-treasurer, Dr. John B. Bruce; delegate, Dr. W. J. Rabenau; alternate, Dr. M. Highfill; Dr. G. D. Wells was elected censor for three years.

Dr. Cole gave an interesting talk on "Medicine and Public Health in the Philippines," which was very freely discussed and enjoyed by every member present.

Dr. W. A. Atkins presented a clinical case of bone felon, which was very interesting.

It was voted to hold our next meeting at Fordland, in March, 1914.

JOHN R. BRUCE, M.D., Secretary.

WRIGHT COUNTY MEDICAL SOCIETY

The first annual meeting of the Wright County Medical Society was held at the city hall, Mountain Grove, Nov. 13, 1913. Members and visitors present: Drs. Rogers, Peyton, Daugherty, McGee, Ames, Fuson and Butzke. Visitors: Drs. England, C. E. Barnes, Edward Wittwer, J. A. Talley, W. J. Little and W. J. Lane. Drs. C. E. Barnes and Edward Wittwer presented their applications for membership. These were acted upon and the doctors were admitted as members.

Dr. E. J. Butzke presented a clinical case of a boy affected with diabetes mellitis. The case was thoroughly discussed and remedies recommended.

Dr. Rogers presented a patient who gave a history of several attacks of abdominal pain. All the doctors examined the case and the consensus of opinion was that it was a case of iliocecal inflammation caused by appendicitis. The case was thoroughly discussed.

Dr. Fuson read a very interesting paper on "Typhoid Fever," which caused a great deal of discussion. All the doctors present gave their opinion of the treatment of typhoid fever.

This was the best meeting ever held in Wright county. The organization of a medical society has brought the doctors in closer fellowship and will prove a benefit to the doctors as well as to their patients. We were sorry not to have had a representative from Hartville and Manes.

Dr. J. A. Ryan of Norwood was requested to present a paper on pneumonia, and Dr. J. A. Peyton to have a paper on influenza at the meeting to be held at Mansfield on February 6.

E. J. BUTZKE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

RADIUM AND RADIUM SALTS.—Radium is used in medicine in the form of its chloride, bromide, sulphate and carbonate. The therapeutic value of radium salts depends on the emanations which are given off from the radium. Radium emanation consists of alpha-rays, beta-rays and gamma-rays, the latter being similar to x-rays and therapeutically the most useful. The quantity and concentration of radium emanations are expressed in terms of "curie" and Mache units. A "curie" is the amount of emanation in equilibrium with 1 gm. of radium and a microcurie is one millionth of a "curie." A microcurie is equivalent to about 2,500 Mache units. It has been claimed that radium emanation is of value in all forms of non-suppurative, acute, subacute and chronic arthritis, in chronic muscle and joint rheumatism, in arthritis deformans, acute and chronic gout, neuralgia, sciatica, lumbago and in tabes dorsalis for the relief of lancinating pains. Its chief value is in the relief of pain. Surgically marked results are obtained in the removal of epitheliomata, birthmarks and scars. Radium may be administered in baths, by subcutaneous injection in the neighborhood of an involved joint (0.25 to 0.5 microcurie in 1 or 2 c.c. distilled water), by local application as compresses (5-10 microcuries), by mouth as a drink cure (in increasing doses of from 1-10 to 10 microcuries three or more times a day), by inhalation, the patient for two hours daily remaining in the emanatorium, which contains 0.0025 to 0.25 (average 0.1) microcurie per liter of air.

RADIUM CHLORIDE.—Radium chloride is supplied in the form of a mixture of radium chloride and barium chloride, and is sold on the basis of its radium content. Radium Chloride-Standard Chemical Co., Radium Chemical, Pittsburgh, Pa.

RADIUM SULPHATE.—Radium sulphate is supplied in the form of a mixture of radium sulphate and barium sulphate and is sold on the basis of its radium content. Radium Sulphate-Standard Chemical Co., Radium Chemical Co., Pittsburgh, Pa. (Jour. A. M. A., Jan. 3, 1914, p. 41).

SODIUM ACID PHOSPHATE.—Sodium Acid phosphate (Sodii Phosphas Acidi), $\text{NaH}_2\text{PO}_4\cdot\text{H}_2\text{O}$, is the mono-

sodium dihydrogen salt of orthophosphoric acid, containing not less than 82 per cent. of anhydrous sodium acid phosphate. Sodium acid phosphate is administered to render the urine acid or to increase its acidity. It is used for this purpose to assist the action of hexamethylenamin which is effective only in acid urine. It should be given so that it has left the stomach before the hexamethylenamin is given. Non-proprietary preparations: Sodium Acid Phosphate, M. C. W., The Mallinckrodt Chemical Works, St. Louis, Mo.; Sodium Phosphate, Monobasic, P. W. R., The Powers-Weightman-Rosengarten Co., Philadelphia, Pa. (Jour. A. M. A., Jan. 10, 1914, p. 127).

SLEE'S REFINED AND CONCENTRATED TETANUS ANTITOXIN (GLOBULIN SOLUTION).—For description of Tetanus Antitoxin see N. N. R., 1913, p. 218. Abbott Alkaloidal Co., Chicago.

SLEE'S NORMAL HORSE SERUM.—For description of Normal Horse Serum see N. N. R., 1913, p. 236. Abbott Alkaloidal Co., Chicago (Jour. A. M. A., Jan. 10, 1914, p. 128).

AMPOULES EMETINE HYDROCHLORIDE, P. D. & Co.—Each ampoule contains emetine hydrochloride 0.02 gm. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A., Jan. 10, 1914, p. 128).

PHENOLSULPHONEPHTHALEIN.—A product differing chemically from phenolphthalein in that a carbonyl group of the latter has been replaced by a sulphone group. Phenolsulphonephthalein is used to determine the functional activity of the kidneys. It is injected intramuscularly or intravenously and its rate of excretion determined colorimetrically. Phenolsulphonephthalein is a red powder which yields a deep red solution with water or alcohol containing an alkali.

PHENOLSULPHONEPHTHALEIN, H. W. & Co.—Made by a special process and said to be exceptionally pure. Hynson, Westcott & Co., Baltimore, Md.

PHENOLSULPHONEPHTHALEIN AMPOULES.—Each contains a solution of 0.006 gm. phenolsulphonephthalein in the form of the monosodium salt. Hynson, Westcott & Co., Baltimore, Md.

STERILE AMPOULES OF MERCURY SALICYLATE.—Each contains 0.06 gm. of mercury salicylate N. N. R., suspended in a vegetable fat. Hynson, Westcott & Co., Baltimore, Md.

SALVARSAN-EHRICH, SUSPENSION IN AMPOULES.—Each contains 0.1 gm. of salvarsan, suspended in a vegetable fat. Hynson, Westcott & Co., Baltimore, Md.

NEOSALVARSAN-EHRICH, SUSPENSION IN AMPOULES.—Each contains 0.15 gm. neosalvarsan suspended in a vegetable fat. Hynson, Westcott & Co., Baltimore, Md. (Jour. A. M. A., Jan. 24, 1914, pp. 297 and 298).

ELARSON.—Elarson is the strontium salt of chlorarsenobenzoic acid, containing about 13 per cent. of arsenic and about 6 per cent. of chlorine. It has the action of arsenic, but the arsenic being in lipid-like combination is said to be better utilized and to exert its therapeutic effects in smaller doses than other organic arsenical preparations. Also, it is said to produce relatively little gastric irritation. It is sold only in the form of Elarson tablets. The Bayer Co., New York (Jour. A. M. A., Jan. 31, 1914, p. 379).

PROPAGANDA FOR REFORM

THE ACTION OF HEXAMETHYLENAMIN.—It has been shown by Hanzlik and Collins that hexamethylenamin can act only in body fluids which are acid in reaction, namely the gastric juice and the urine. The only part of the body in which hexamethylenamin may be expected to exert an antiseptic action is in the urinary tract, and then only if the urine is acid. If the urine is not acid already sodium acid phosphate should be administered to render it so. The administration of sodium or potassium acetate or citrate, in sufficient quantity, will render an acid urine alkaline and inhibit the action of hexamethylenamin (*Jour. A. M. A.*, Jan. 3, 1914, p. 43).

ODOR-O-NO.—Odor-o-no, The Odor-o-no Company, Cincinnati, Ohio, is sold as the "anti dress-shield toilet water." It is claimed to eliminate excessive perspiration and to be absolutely harmless. Confirming the analysis made by the Indiana state chemists some time ago, the A. M. A. Chemical Laboratory reports that now, as when examined before, Odor-o-no is a strong solution of aluminum chloride. When this solution is applied to the skin, it will be decomposed by the perspiration into free hydrochloric acid which will attack and irritate the skin, and aluminum hydroxide which tends to clog up the pores (*Jour. A. M. A.*, Jan. 3, 1914, p. 54).

HYDROCYANATE OF IRON, TILDEN.—While from the name one would judge Hydrocyanate of Iron, Tilden to be a cyanide of iron, analysis in the A. M. A. Chemical Laboratory has demonstrated the preparation to consist essentially of equal parts of tale and Prussian blue, with traces of organic matter having the properties of alkaloids. Prussian blue is a remedy that has been used for epilepsy and found wanting (*Jour. A. M. A.*, Jan. 3, 1914, p. 58).

THE QUALITY OF SODIUM ACID PHOSPHATE.—As it appears probable that the use of sodium acid phosphate will increase and since previous experience has emphasized the unreliability of little used drugs, the A. M. A. Chemical Laboratory deemed it important to examine the market supply. While the official sodium phosphate may be obtained of exceptional purity, the examination showed that the market supply of sodium acid phosphate was decidedly variable and much less pure, although not seriously impure. Based on the examination the laboratory proposed standards which were thought fair, both to those who make it and those who use it in their practice. The examination showed the product of the Mallinckrodt Chemical Works and of the Powers-Weightman-Rosengarten Company to comply with the proposed standards. Acting on the report of the laboratory, the Council on Pharmacy and Chemistry decided to describe sodium acid phosphate in New and Nonofficial Remedies and, having adopted the proposed standards of purity, accepted the two brands named for inclusion with N. N. R. (*Jour. A. M. A.*, Jan. 10, 1914, p. 142).

HYP-QUINIDOL.—While no definite statements appear to be contained in the advertising matter sent out by R. W. Gardner, certain statements suggest that Hypo-Quinidol might be some sort of a quinin hypophosphite preparation. But if this is true, its action would be the same as other salts of quinin and the extravagant claims made could not be substantiated. Hypo-Quinidol is a preparation the composition of

which is secret and for which highly improbable claims are made (*Jour. A. M. A.*, Jan. 10, 1914, p. 148).

THE RICHIE MORPHIN CURE.—The Richie Company was discussed in Collier's Great American Fraud series as one of the concerns which under the guise of mail-order "cures" for the morphin habit fosters the slavery of the drug habit by substituting for the morphin addiction an addiction to their villainous mixtures of opiates. More recently shipments of the Richie "cure" were seized by the Federal authorities and found on analysis to contain from 7.21 grains to 15.95 grains of morphin sulphate to the fluidounce (*Jour. A. M. A.*, Jan. 10, 1914, p. 144).

RADIUM IN CARCINOMA.—Sparmann reports on the after-history of fifty-three cases of carcinoma treated with radium. Of these eleven have died since the treatment, in six the tumor has disappeared, in five the condition seems improved, in seven the condition is aggravated and in the others the treatment was not continued because the condition of the patients had become worse. While these results show that radium is a remedy of use in the treatment of cancer it is not a sovereign remedy as some enthusiastic reports would have us believe (*Jour. A. M. A.*, Jan. 17, 1914, p. 212).

EXPURGO ANTI-DIABETES.—The claim made for Expurgo Anti-Diabetes (sold in Canada as Sanol Anti-Diabetes) that it is "The only positive cure for Diabetes" and others of this character should be sufficient to condemn it. Nevertheless medical journals advertise it and physicians have been found to give testimonials for it. Examination in the A. M. A. Chemical Laboratory showed that Expurgo-Anti-Diabetes is essentially a watery solution of plant extractives with small quantities of sodium salicylate and salt. The exploiters claim that their stuff contains the fruit and bark of jambul, rosemary, star anise and fluid extract of calamus, cinchona, cola, condurango and gentian. One of the claimed ingredients, jambul, was in vogue as a remedy for diabetes some years ago. It was tried and found wanting and relegated to the therapeutic scrap heap (*Jour. A. M. A.*, Jan. 24, 1914, p. 312).

CASE'S RHEUMATIC SPECIFIC.—This is a "patent medicine" sold under the inferential claim that it does not contain salicylate. A package bearing the statement that this medicine "Cures where all else fails rheumatism; muscular, sciatica, lumbago, gout, neuralgia, neuritis," contained one box of "Rheumatic and Gout Pills" and one of "Bilious and Liver Tablets." Examination in the A. M. A. Chemical Laboratory showed the first to contain sodium salicylate with some magnesium oxid and licorice root while the second was found to contain aloin or some preparation of aloes as the purgative constituent (*Jour. A. M. A.*, Jan. 31, 1914, p. 394).

BOOK REVIEWS

BLOOD PRESSURE. By Francis Ashley Faught, M.D., formerly Director of the Laboratory of Clinical Medicine of the Medico-Chirurgical Hospital; Instructor in Medicine at the Medico-Chirurgical College, Philadelphia. Illustrated. W. B. Saunders Company, Philadelphia. 1913.

The author has hit a timely topic in this book. His discussion of the physiology of circulation, while giv-

ing us nothing new, serves as a good introduction for his discussion of the sphygmomanometer. His description of the various instruments on the market and the discussion of their merits and demerits are valuable. The methods of taking blood pressure are worthy of study, and his description of the excellent method of Korotkoff should be in the hands of all physicians. His discussion of blood pressure and disease is not marked by anything new or original, but it puts the facts together in a clear, concise way which will save the busy practitioner much reading when he wishes to inform himself on this subject. The work will commend itself to anyone familiar with this important subject.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume II, Number VI (December). Octavo of 186 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.

This number completes Volume II. The topics discussed include: Tuberculosis of the Lung; Bone Cyst of the Radius; Pyonephrosis; Drainage; Exostosis of Radius and Ulna; Ununited Fracture of the Radius; Ankylosis of Elbow; Laminectomy for Tuberculoma of Spinal Column with Compression of Spinal Cord; Subcutaneous Abscess Following Tuberculosis of the Spine; Undescended Testicle in Inguinal Canal and Cholelithiasis. The volume is indexed.

AN INTRODUCTION TO THE HISTORY OF MEDICINE, WITH MEDICAL CHRONOLOGY, BIBLIOGRAPHY, DATA AND TEST QUESTIONS. By Fielding H. Garrison, A. B., M.D., Assistant Librarian, Surgeon General's Library, Washington, D. C. Illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Pp. 753. Price, cloth \$6.00; half morocco, \$7.50.

The historical spirit is abroad. An unusual awakening concerning the history of our profession has recently manifested itself. This is evident, not only in Europe, but also in our own country. American historic contributions have for the most part been confined to Americana or to biographies, and therefore the criteria of what a work on the history of medicine should be have not been applicable to them. The "Grundriss" of Baas, rendered into English by H. E. Henderson of Cincinnati, 1889; the epitome of Roswell Park, 1897, and the history of Neuburger, the first volume of which, translated by Ernest Playfair and issued from the Oxford press in 1910, are the books usually found on the shelves of American physicians. This list will now be enlarged by Dr. Garrison's "Introduction to the History of Medicine." He is the first American author who has essayed to present the history of medicine to the practical American mind and he has done it in a manner as charming as it is satisfactory. For accuracy and lucidity it outranks all its predecessors. He is thoroughly imbued with the historic spirit and his book arouses it in the reader. He modestly shrinks from being compared with Haeser and Neuburger, but his volume is as erudite and perhaps more accurate than the former and more scholarly and readily understood than the latter. He outranks both in presenting the cultural and sociologic aspects of medical history. The strong human note which prevails throughout constitutes one of the most attractive features of the work, and how refreshing the views he expresses in the preface, after suggesting some of the methods for interesting the medical student in medical history: "The books, facts and dates are as nothing in comparison with the chance of giving the student an enlarged view of the humaniora, the nameless unremembered things which help to make him a gentleman in his profession."

The author treats the subject under twelve heads. Each period is followed by a presentation of its cultural and sociological relations.

To the student beginning the study of medical history during his graduating year or following his admission into the ranks of the profession, the book will commend itself especially because of the thorough and lucid discussion of the modern period. It will impress the names which have been given to structures, diseases and conditions upon his mind; it will familiarize him with the great personalities that stand out boldly as representatives of the advances in medicine. The pictures for which the author has drawn largely upon the valuable collections in the Surgeon General's library, illustrate the customs as well as the personalities of the most prominent figures of the various periods.

The appendices on medical chronology and the bibliographic notes will be found helpful and convenient even to the advanced student. The test questions, 150 in number, are suggestive and stimulating. It is safe to predict a wide circle of readers for this volume. The American medical profession is proud to number among its members the author of this history of medicine. The publishers present the book in an attractive but weighty garb.

A MANUAL OF VENEREAL DISEASES. Introduction by Sir Alfred Keogh, K. C. B. History, Statistics, Invaliding etc., Brevet Colonel C. H. Melyville, R.A.M.C.; Clinical Pathology and Bacteriology, Brevet Colonel Sir Wm. Leishman, K.H.B., F.R.S., R.A.M.C.; Clinical Course and Treatment, Major C. E. Pollock, R.A.M.C. Second edition, revised and largely rewritten, with new matter by Major L. W. Harrison, R.A.M.C. Pp. 318. Oxford University Press, American Branch, 35 W. Thirty-Second street, New York City. 1913. \$3.75.

The second edition contains many changes and is also a complete revision of the sections devoted to syphilis, made necessary by the advances in medical knowledge of that disease. The work is thoroughly up to date, and the effort of the authors to make the volume really practical has been amply realized.

DYSENTERIES: THEIR DIFFERENTIATION AND TREATMENT. By Leonard Rogers, M.D., F.R.C.P., Physician to the Isolation Ward (cholera and dysentery) Medical College Hospital, and Professor of Pathology, Medical College, Calcutta, etc. Pp. 336. Illustrated. Oxford University Press, American Branch, 35 West Thirty-Second Street, New York City. 1913. \$3.75.

The present work is the outcome of the author's experience with dysentery in Calcutta during the past decade. Description and differentiation of the two major classes of amoebic and bacillary dysentery in their pathological and clinical aspects constitutes the aim of the volume. The author's discovery of the rapid specific action of hypodermic injection of saline solution of emetine in amoebic dysentery enlarges the importance of distinguishing between amoebic and bacillary dysentery. An interesting chapter on tropical or amoebic abscess of the liver has been included in this volume, as well as a chapter on diarrhea alba, or sprue.

HEADACHE: ITS VARIETIES, THEIR NATURE, RECOGNITION AND TREATMENT. A theoretical and practical treatise for students and practitioners. By Dr. Siegmund Auerbach, Chief of the Polyclinic for Nervous Diseases in Frankfurt, A. M. Translated by Ernest Playfair, M.B., M.R.C.P. Pp. 208. Oxford University Press, American Branch, 35 W. Thirty-Second street, New York City. 1913. \$1.50.

The volume presents a differential diagnosis of the individual varieties of headache occurring as independent complaints, with suggestions as to treatment. The work fills an original place and is a most valuable complement to numerous considerations of headache from the standpoint of special pathology that have appeared within recent years.

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M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE CAUSATION AND PREVENTION OF INFANTILE PARALYSIS *

E. W. SAUNDERS, M.D.
ST. LOUIS

ROLAND MEISENBACH, M.D.
BUFFALO, N. Y.

AND

W. E. WISDOM, M.D.
DE QUEEN, ARK.

CHAPTER I.

A prosperous farmer in the Middle West retires to rest after seeing his fowls on the roost, his well-fed hogs asleep, and "no evil ocurrent." In the morning the chickens and turkeys are lying dead beneath the perch, the few survivors are limping about with their heads trailing on the ground; the hogs are all like Sennacherib's Host, except two old sows which are dragging their paralyzed hindquarters after them. Several days later the dog begins to totter on its feet, is unable to raise its head, loses its voice, and finally its power of deglutition. It is put to death under the accusation of "dumb rabies," unless the farmer happens to have a pack of hounds, a number of which are attacked at the same time, and then a neighbor comes under suspicion of having poisoned the dogs. At the same time a tame badger is paralyzed in its hindquarters, just as the surviving hogs were. Perhaps a few more dead sparrows than usual are in evidence. The exposed carcasses of the hogs and fowls attract the buzzards, which come in numbers and stay as long as the feast lasts. After gorging themselves, they are

seen to walk about, suddenly to lose control of their extremities and necks, and then to fall over dead. A few days later, a fine young colt a week old "goes down" (as the farmers say) and has to be held up to enable it to suckle the dam. It finally recovers, with some wasted muscles, and is an animal of impaired value all its life. One morning the farmer awakens to find one of his eight children unable to arise. The child went to bed perfectly well, and slept soundly all night. The physician is sent for and pronounces the case one of infantile paralysis. Strange to say, the other seven children show no evidence of disease at any time. This is a composite picture, some features of which will be familiar to most of our farmers and rural physicians.

What is the meaning of all this? The destroying angel seems to be hovering over all forms of life, killing some and paralyzing others. The authorities say that the poultry are affected by ptomain poisoning. They accuse the farmer of having left putrefying carcasses exposed where the fowls could devour them. What about the hogs? Why, of course, they died of hog cholera. What about the dogs, taking the case where eight or ten were more or less paralyzed on the same day? Oh, they had distemper! What about the colt? It had congenital weakness—in spite of the fact that it frisked about for a week after it was born. What about the badger which was paralyzed in its hindquarters, exactly like the hogs? That must have been due to an accident! What about the sparrows? Well, nobody knows what sparrows die of! What about the buzzards; did they too die of ptomain poisoning like the fowl? The authorities quail before this query and fear to answer "Yes," lest an outburst of unscientific mirth be evoked that would resound around the world. Lastly, but most important of all, from whence came the paralyzing stroke of poliomyelitis on the child? The authorities reply that the child must have acquired the disease from some human carrier, although the farm is situated

* Preliminary report presented before the St. Louis Medical Society in regular session, Feb. 8, 1913. A fuller report presented to the Missouri State Medical Association in general session at its annual meeting, held in St. Louis, May 13, 14, 15, 1913. Presented by invitation, in part, before the Fourth International Congress of Hygiene, Buffalo, August, 1913, and in complete form before the University of Virginia, Feb. 20, 1914.

in a sparsely settled country, and the child has never been off the place and no stranger has visited it for weeks or months. Moreover, there has been no recognized case of infantile paralysis in the county previously. Suppose that all this has occurred for the first time in the history of mankind, and naturally should become the subject to judicial investigation, do you believe that the juristic mind would be satisfied with such a heterogeneous verdict? We think not. Is there not some possible common cause of all this destruction of life and of the integrity of the nervous system?

CHAPTER II

THE GREEN FLY—*LUCILIA CAESAR*

(Whether the *Lucilia Caesar* is the only species of green fly engaged in this terrible work, we are not able to say at present, but we think so.)

About eighteen months ago we began the search for a larval fly which would, when



Fig. 1.

ingested into fowls or other animals, produce the effects detailed in the previous chapter. The first paper was read before the St. Louis Medical Society, Feb. 8, 1913, but was not published; it was followed by one read at the annual session of the Missouri State Medical Association held at St. Louis, May 13, 14 and 15, 1913, which gives the theory on which our researches were based.¹ Our work is revolutionary, and we do not hesitate to carry it even into the pages of the dictionaries. By what right do the lexicographers confound things that differ after this fashion—"ptomain" is properly defined according to etymology and to sound usage, and so is "toxin"; then, under a subheading of the latter, we find "ptomain"? So learned we not Greek under Gildersleeve! All scientific discussion suffers if the vehicles of thought are thus trifled with. As well might they define "bridge" and "house" and then put "bridge" as a subheading under "house." The first step in our investigation was the disproof of the theory of ptomain

intoxication, universally held as the explanation of the wholesale destruction by paralytic death of the fowl on the farm and of the residual paralysis of those that survive. For many months we fed fowls on putrid flesh alone, and then on putrid flesh teeming with maggots. The animals failed to show any morbid effects whatever.

It is a well-known fact that on large poultry farms young turkeys, pheasants and chickens are fed on maggots, which are obtained by hanging meat over boxes of corn-meal. The fowls devour the maggots in large numbers and flourish on the diet. However, on these same farms every now and then there are large losses of birds, due undoubtedly to a toxic larva being introduced by the green fly. Let it be understood that chickens do not, as a rule, feed on the carcass of any animal unless it be chopped up and fed to them. A dead chicken may lie



Fig. 2.

in the barnyard all winter unmolested by the poultry, until spring comes, and the green fly, or other species of blow-fly, deposits its eggs. They then greedily devour the larvae. We found that the fly-blown meat from New Orleans was harmless, at which we were not surprised, as there was no evidence to show that the larvae were deposited by specifically infected flies. After many disappointing experiments with larvae obtained from carcasses of fowls dying from limberneck in different parts of the South during the spring months, we at last, in June, obtained our long-sought toxivirulent larvae. One reason for the many disappointments, as we afterward learned, was that we expected the larvae deposited in the carcass immediately after death of the fowl by "limber-neck" to be toxivirulent. Later in the summer we proved that the green fly had to become infected by feeding on the *materies morbi* (that is to say, the carcass, or possibly the secretions, of an animal affected by the green-fly epizootic, or of a case of poliomyelitis) at least two days before depos-

1. Jour. Mo. State Med. Assn., June, 1913.

iting specifically infected ova. We also found that the ova deposited in any other medium, animal or vegetable, were equally virulent, although this conclusion was drawn more particularly from numerous facts observed in the field.

Let us restate the working theory set forth in the original paper presented by Saunders before the Missouri State Medical Association,



Fig. 3.

May 13, 1913. If poliomyelitis be like tetanus and rabies, of alien source originally, and the epizootic phenomena observed on the farm are to be brought into vital relation with sporadic and epidemic poliomyelitis, three factors must be assumed:

1. A cryptic virus (sub-virus, potential virus, dormant or immature virus, whichever form you may choose).

2. A mature (kinetic) virus, denominated simply "virus."

3. A neurolytic toxalbumose, the product of the mature virus only, which, as its name implies, passes speedily and unchanged through the animal mucous membrane, producing within a few hours its destroying effect on the nerve cells engaged in motor or in vital function, as the ease may be.

Many facts, gathered from observation and from the literature of poliomyelitis, would seem as well to demand the assumption of the third factor, e. g., the ease cited by Vulpinus of two children living in a village free from infection who were paralyzed within thirty-six hours after spending the day in a village where the disease was raging. Too short a period to allow the supposition of an incubation!

We can all recall cases of sudden paralysis in a child apparently well, with no rise of tempera-

ture, succeeded by a stormy pyrexial period, with meningeal and most threatening symptoms generally. Perhaps the primary toxemia, due to the ingestion of greater or lesser amounts of the toxin contained in the larvae, may greatly abbreviate the incubation period of the virus. It is self-evident that the dose of the toxin, determined by the size and the number of the larvae swallowed by the unsuspecting victim, would determine the severity of the morbid phenomena produced, independently of all consideration of individual susceptibility to the virus.

All attempts to inoculate fowls or guinea-pigs or other animals with the blood or tissues of animals dying from ingestion of the specific larvae have failed. On the other hand, the carcasses of the animals dying—usually within a few hours, sometimes several days after the ingestion of the specific larvae—never failed to infect green flies, so that their ova deposited the third day after feeding were toxivirulent. We could kill a young fowl or guinea-pig of any age, sometimes within six hours, by the oral administration of a single specific larva. An old rabbit was killed within two hours by injecting intraspinally a few drops of the filtered



Fig. 4.

emulsion of the specific larvae. Having established, then, on the basis of numerous experiments, the two facts that limber-neck of fowls was not a ptomain poisoning, and that there was a dormant virus in the carcasses of all animals dying from the administration of specific larvae—a virus which could be propagated, and thus prove its title to recognition as a living entity, only by the intervention of the green fly

lost—we proceeded to administer the larvae to monkeys, and found that they died from the effect of the biochemical poison just as the other creatures did. They survived for from twenty-four hours to six days after the first dose, according to the amount ingested and the potency of the larvae. The phenomena, produced in mon-

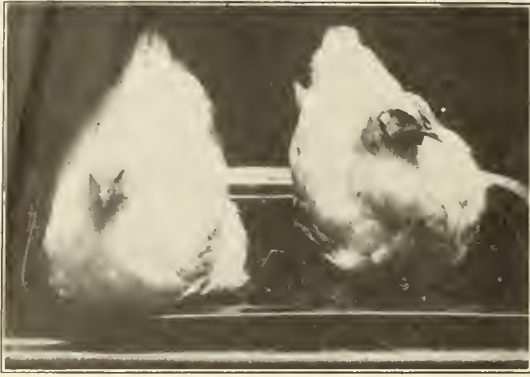


Fig. 5.

keys, however, differed in some most important particulars from those shown by all other animals. The monkeys would develop most profuse coryza, and a moderate temperature, which soon subsided and became subnormal (even reaching as low as 92 degrees) until death. Aphonia, paralysis of deglutition and paralysis of respiration ensued in the order narrated. In some instances the monkey would recover its voice and be able to eat somewhat better, but certain groups of muscles could not act normally; the monkey would be partially paralyzed. After this, residual paralysis remained, contractures rapidly set in and in some of our monkeys the contractures grew so great as to render them unable to rise on their hind legs or to climb.

PROTOCOLS OF A FEW OF THE ANIMAL EXPERIMENTS

A large number of animals was necessary in order to determine the constancy of the toxic virus, and the results were so uniform that some of the animals could be brought into certain stages at almost a given time. The resistance and age of the animal had to be taken into consideration in administering the dosage. The symptoms in the monkeys were identical with poliomyelitis in the human and the course of the disease was similar. Most of the animals, and all of the monkeys, that were fed on the toxic larvae were carefully autopsied under aseptic precautions. The brain, spinal cord and other viscera were carefully removed, and a portion of each of these placed in a 10 per cent. solution of formalin and in glycerin. Space will not permit to give details of all the animals used,

and therefore only a few will be herein summarized:

Monkey No. 8 (Black).—Fed on a glycerin triturate of toxic larvae representing about 45 larvae. After six hours, monkey began to sneeze; eyes grew somewhat dull and it could easily be distinguished from the other monkeys which had not been fed on the larvae. The nasal secretion and coryza became marked and the monkey grew sick, with slight rise in temperature. Two hours later monkey refused food and respiration rapidly diminished; monkey became inactive and could not stand in the cage. Next morning monkey was seen to be in a recumbent position, apparently dead, but heart action still present, with respirations about eight per minute. (See Fig. 1.) Shortly after monkey died and was sent to the autopsy room.

Monkey A-5 (Black).—Somewhat older than the previous monkey. Received about forty-five toxic larvae in triturate form. A few hours later, symptoms of coryza, lacrimation and later of aphonia, with paralysis of deglutition, appeared. Respiratory paralysis was present. Shortly after monkey showed symptoms of local paralysis of the hind legs, the spine and the neck muscles. (See Fig. 2.) The next day monkey slightly improved, and was fed another dose of toxic larvae. After this its respiration grew slower and it gradually passed away after four days.



Fig. 6.

Monkey No. 7 (Red).—Fed on the toxic larvae, showed typical symptoms, as the other monkeys did, but offered more resistance. After twenty-four hours, monkey unable to move about cage, having had an acute febrile attack: nasal discharge diminished, monkey regained voice, still refused bananas, but partook of some warm

milk. After two weeks had elapsed, monkey still alive, but unable to stand on his hind legs, creeping in his cage and dragging his hind limbs after him. (See Fig. 3.)

Monkey No. 15.—Was fed on sixty virulent toxic larvae August 17, and after passing through the acute stage, with the characteristic



Fig. 7.

symptoms, regaining voice and motion of the arms; was unable to climb or walk, dragging its hindquarters after. Monkey lived five months in this condition, but it was noticed that gradually the contractures of the flexors were growing stronger and stronger, so that life seemed a burden. Monkey autopsied January 16. (See Fig. 4.)

Two healthy Leghorns, especially fine breed, were given large quantities (108 toxic larvae at a dose) for three days, in glycerin triturate. Chickens gradually grew inactive, refused food and constantly desired to rest. Both chickens walked lame, and one had its left wing drooping. (See Fig. 5.) Both chickens had paralysis of their legs and were unable to stand. Several days later the chickens returned apparently to normal. (White Leghorns will not devour larvae unless compelled to do so by hunger, whilst Rhode Island Reds prefer this diet to any other. Perhaps this characteristic of the latter breed of fowls may account for the increasing prevalence of the green-fly epizootic and of poliomyelitis, as it has become the most favored breed in the United States.)

Gordon Setter.—Ingesting green fly larvae from the carcass of a limberneck chicken, became paralyzed in the hindquarters; sensation present in the hind legs, but slightly diminished; motor paralysis complete up to the twelfth dorsal vertebra. Dog very bright and alert but unable to walk; no motor paralysis in forward extremities or neck. Dog partook freely of food, barked and attempted to go for the monkeys and other animals by raising its head and its forepaws. The

photographs (Figs. 6 and 7) were taken twenty-five days after the paralysis set in. For pathological purposes dog was bled to death and autopsied.

Guided by the well-established fact, proven and corroborated by all experimenters in the field of poliomyelitis, that the monkey is hospitable to the virus of poliomyelitis, we ventured on the next phase of our experiments. Monkey No. 4 was dying on the sixth day after larval infection induced by the administration of fifty larvae. Dr. T. W. White, University of Virginia, who executed in a masterly manner all the experiments done in the Bethesda Hospital Laboratory, abstracted several minims of cerebrospinal fluid from the moribund animal, and injected one-third into the spinal canal of Monkey No. 5, one-third into that of an old rabbit, and one-third into that of a pig weighing about twenty-five pounds. The pig and the rabbit remained well. The monkey sickened on the eighth day, was unable to climb, grew rapidly weaker, so that when turned on its side it was scarcely able to struggle to its feet, showed a slight coryza, and the eyes were bleared. On the eleventh day it was so helpless that it was unable to feed itself. The power of deglutition failed, the food would drop out of the mouth, and it died by respiratory paralysis—the rate falling as low as five to the minute; the hind legs were

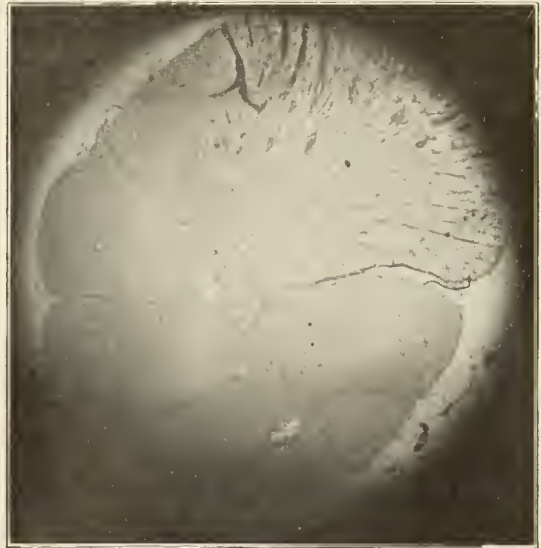


Fig. 8.

completely paralyzed. Note the facts: first, that the other animals were inhospitable to the virus; second, that the incubation period was eight days, and third, that death was by respiratory paralysis preceded by progressive muscular weakness, and finally complete paralysis of the hind legs; temperature far subnormal.

The cord of No. 5 was removed aseptically by Dr. Charles Klenk, and half of it preserved in glycerin and half in 10 per cent. formalin. The formalin portion was sent to Dr. Bowman, the pathologist who prepared all the sections, the rest being taken from the cords of dogs and monkeys which died by larval toxi-infection. Some of the glycerin-preserved cord was emul-



Fig. 9.

sified and injected into the spinal canal of Monkey No. 6. This animal remained perfectly well until the tenth day, and then suddenly showed partial paralysis of the right fore leg and shoulder. The animal was unable to reach the top of the cage with this paw, and unable to hold on to the sides of the cage. In eating, it could bring up the right fore paw and apply it to the chest, but was not able to grasp the banana, as monkeys always do, with both paws, but sometimes used the paw applied to the surface of the chest as a receptacle for the banana. After two months it showed great improvement in the paretic muscles and was otherwise well. No. 7 was inoculated intraspinally with the same emulsion as No. 6, sickened on the eleventh day, and after a few days of droopiness and great weakness, recovered completely. The appetite continued good, but the muscular power was greatly diminished. No. 8 was inoculated with half the dose that No. 6 and No. 7 received, and showed no result. The half dose was used because the cord of No. 5 had been sent away, and this was all that we had remaining of the emulsion.

About this time it became evident that our stock of larvae, which we had thought inexhaustible, was deteriorating rapidly in toxic power, and the testing on guinea-pigs resulted in throwing out some lots which we had thought to be potent. A hog receiving a large dose intramuscularly was not affected at all. Fearing

that our experiments might come to an untimely close, as the virus derived from No. 5 was also apparently deteriorating, we proceeded to establish a new series. A large dose of larvae, derived from several lots, was given to No. 7, we being in doubt as to whether the animal would be found immunized to the toxalbumose by the virus which it had received previously. However, this animal took ill on the second day after the first dose, and died as all the other larval-infected monkeys had done. The attempt to abstract fluid from the spinal canal failed, and so we were compelled to take the cord and use emulsions of this for further inoculations.

At this point the most interesting experiment of the whole series was made. No. 9, a very lively monkey just received, was given a large dose of the larvae composed of several lots which had been found to be deteriorating in toxic power. It remained perfectly well for eight days, and then sickened, as the other serially inoculated monkeys had done, becoming so feeble that it could hardly climb on a box 8 inches high, and fell backward when trying to hold on to the sides of the cage. It lost weight rapidly and seemed doomed to die, but after four days' critical illness, it began to improve and regain strength. If this case be admitted to be one of Simian poliomyelitis, as it seems to us it should be, it proves that the assumption of the existence in the specific larvae of a biochemical

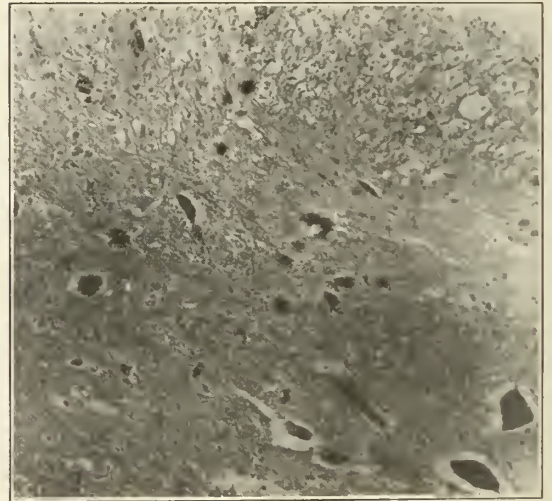


Fig. 10

poison, and also of a virus, is proven beyond a question. We had not attempted hitherto the separation of these two elements in the larvae, as such experiments require more time than busy practitioners are able to give.

We have remaining in the Bethesda Laboratory, Monkey No. 6, with residual paralysis which was serially inoculated in the second generation

from No. 4 through No. 5; No. 9, which is apparently recovering from the infection of direct larval after escaping the primary intoxication; No. 8, which resisted the first inoculation with half a dose of the emulsion of the cord of No. 5, and subsequently a much larger dose of the emulsion of the cord of No. 7. The only lesson that No. 8 could now teach us, perhaps, would

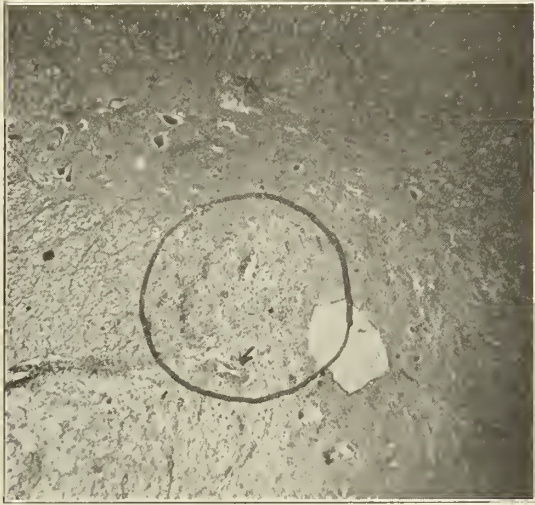


Fig. 11.

be to show an immunity to infection by inoculation with the classical poliomyelitis virus.

At the same time that No. 9 was successfully infected, a young hog, weighing about 35 pounds, was given 500 of the deteriorated larvae without result. Until No. 9 sickened on the eighth day, we were dismayed by the failure to kill or paralyze the hog. The result in the case of No. 9 furnished the explanation of the failure of this experiment.

In reference to the effect of the fresh larvae on the various animals, it should be noted that guinea-pigs never recover from the smallest dose, and those fed on the second generation of fly larvae succumbed but lived for a somewhat longer period. We found that boiling or heating for half an hour at 140 degrees would destroy the toxic property of our emulsion. Young chickens require very small doses, while old chickens require very large doses, and some seem to be absolutely immune. Young rabbits are about as susceptible to the biochemical poison as guinea-pigs, while we failed to kill an old rabbit with a large dose.

The protocols of our experiments are all here, and are submitted for examination, but are too voluminous to be read. One of the Buffalo monkeys, No. 15, recovered its health after the administration of sixty larvae, and lived for five months with residual paralysis of the hind legs. (See Fig. 4.)

PATHOLOGY

The pathological specimens of the animals were submitted to the pathologist, Dr. Frederick B. Bowman of Buffalo, who reports on some of the specimens handed him as follows:

Red Monkey No. 6.—(Rather poorly preserved.) There is round-cell infiltration. (slight) of anterior cornua, and there are some seen in the post cornua also. Near the central canal is found a small ring of round cells surrounding an area of rather pale pink tissue. The blood-vessels are generally engorged.

Monkey A5 (black.)—Some round cells in both anterior and posterior cornua. Blood-vessels are injected, but round cells bear no relation to the blood-vessels. Ganglionic cells generally are well stained, only a few here and there showing some granulation. Hosts of round cells present in other section examined and more severe vessel injection.

Monkey No. 8 B (black.)—Section not well fixed apparently. However, blood-vessel injection is quite marked.

Monkey St. Louis No. 5.—Blood-vessels generally somewhat injected. Some round-celled infiltration. These bear no relation to the engorged blood-vessels. Some of the ganglion cells stain very poorly and appear swollen and granular. Many of them, however, are distinct and normal looking.

Monkey No. 7 (red.)—Specimen is rather fragmented. However, it shows marked engorgement of the vessels with masses of round cells here and there and generally intimately related to the blood-vessels. Ganglionic cells generally show evidence of degeneration.

Dog No. 1.—Blood-vessels engorged with red blood-cells. Very few round cells present, and these bear no intimate relation to the blood-vessels. Ganglionic cells are generally somewhat swollen and some appear granular. The processes have entirely disappeared in many instances and in others no definite anatomical picture of the cell can be made out.

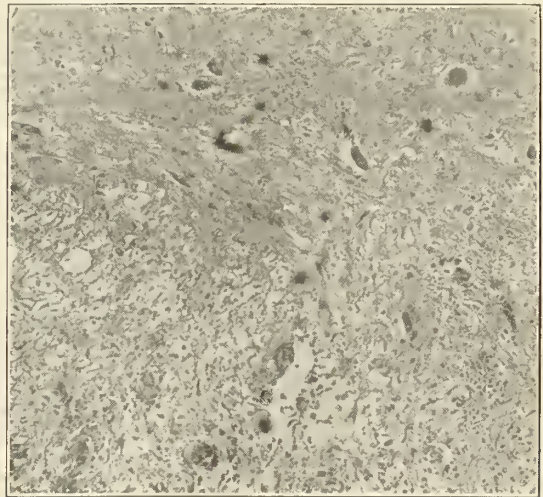


Fig. 12.

Dog A1.—Blood-vessels engorged with red blood-cells and surrounding these blood-vessels and extending into the surrounding gray matter are large numbers of round cells which in some places are gathered into masses. Practically no ganglionic cells are seen and the surrounding tissue appears broken and fragmented. The round cells above mentioned are intimately related to the blood-vessels. (See microphotographs, Figs. 8, 9, 10, 11 and 12.)

We have thus established the existence of a toxivirulent fly larva, limited to one species as far as we know. The wide variation in the potency of different lots of larvae, even when fresh, is to be explained, no doubt, by the more or less extensive admixture of non-specific larvae. For a long time we were in ignorance as to the identity of the fly, and it will require very painstaking work to establish all the facts, inclusive and exclusive, concerning the fly. This larva is destructive, in a greater or lesser degree, to all animals experimented on, as to life and integrity of the nervous system.² From observation in the field, it would appear that no species is entirely immune to the biochemical poison. We have not been able to find any instances of cattle, sheep or goats, either young or old, being affected. It is easy to see how colts are infected when we remember that all blow-flies delight in depositing their ova in any orifice of the animal body, and the udder of the mare might easily be the recipient of such deposit. In the case of lambs this source of infection would be impossible, seeing that they are born before the fly season. The fact that the cow is milked twice a day might diminish the risk of infection to the calf. The raccoon, no doubt, owes the perpetuation of its species to the habit of washing its food vigorously before eating, living at it does beside streams where the green fly is always to be found. We had intended to test the toxivirulent larvae on many more species of animals but having so many experiments to make we put it off until our supply of specific larvae had almost become exhausted.

In seeking the source of infantile paralysis in the insect world, we had to find one that fulfills the requirement of ubiquity, as stated by Dr. Colin Russell in his article in Jelliffe and White. He suggests the housefly. In the green fly, however, we have an insect which approximates ubiquity far more closely than the housefly. Every sportsman can tell that in summer he cannot land a fish in his boat, half a mile from shore, without finding in a few minutes one or two green flies on it. When any game is shot on a warm day in autumn, these same green flies are there before the sportsman reaches his game. From Canada to Florida we hear exactly the same story. Almost every alley in the cities of the United States contains this insect. It is very strong of wing and is possessed of a wonderful power of scent, is extremely hardy, and withstands the cold far better than the housefly. It is not a domestic fly and never enters the habitations of man except when attracted by the odor of boiling cabbage, cauliflower or any of the rank-smelling

vegetables, or of fish, chicken entrails, or any putrid substance. The savor of cooking meat does not seem to attract it so much as these odors. When it has accomplished its object, which is the depositing of its ova, alas! usually on some article of human food, it immediately seeks to escape. It also seeks refuge from storms in the house, as stated by Howard. It hibernates in dwellings, especially in the well-heated houses of cold climates. It is the oviparous desire which dominates it so completely that it loses all sense of fear and is thus rendered easy



Fig. 13.

of capture and destruction. While it is found in numbers near the habitations of man, especially around the poultry yard and pig-pen, its primeval origin was undoubtedly in the wilds. It is unfailingly found along the streams in every region and the smell of fish seems to be more attractive to it than any other odor, unless it be that of boiling cabbage.

During the winter of 1913-14 we have captured four specimens in one of the most insect-proof houses in St. Louis, and on a cold day succeeding a mild one they have been found on the sidewalk, benumbed but alive.

2. The hog which at the time of the reading of this paper seemed to have resisted the toxic effect of the larvae administered became paralyzed in its hind quarters on the fifth day and died on the eighth day.

CHAPTER III

We are now prepared to take up the discussion of the etiology of poliomyelitis, both sporadic and epidemic, in the light of these facts concerning the green-fly epizootic. No one will deny that the literature on the subject is chaotic. The year after our investigations were begun we found in Colin Russell's article the only statement from any authority which gave us aid and comfort in our labors. The *non-sequitors* found in the writings of our ablest authorities are sometimes astounding. It seems to be the consensus of opinion that poliomyelitis is etiologically an ochletic disease, and the analogy has been drawn by a Swedish writer between this and epidemic cerebrospinal meningitis. Reasoning from analogy is very seductive but is only suggestive after all. It can never bring finality but is useful in formulating a workable theory. The fatal objection to this analogy is that epidemic cerebrospinal meningitis rages in the winter season with increasing intensity as the weather grows colder, disappearing in summer. The disease which is the subject of our inquiry, on the other hand, is admitted to be essentially one of the fly season, with some notable exceptions which we shall later discuss. The infected hibernating green-fly might explain the occurrence of some cases in winter. Other writers in the most admirable report of the Swedish Government to the International Congress on Hygiene, 1912, see a strong analogy between poliomyelitis on the one hand and gastroenteric diseases—cholera, typhoid and dysentery—on the other, etiologically considered. The analogy is so vague, however, as to elude exact analysis. We find, on the other hand, the analogues of our disease in tetanus and in rabies, which are clearly of non-human origin, and yet capable of transmission from man to man. If we recall the canine origin of rabies and the geogenous source of tetanus we are prepared better to consider the aviary origin of poliomyelitis through the medium of the green fly host. In the paper read in May, 1913, Saunders stated that we were considering only the sporadic and epidemic forms of the disease as known in the Middle West and in many other parts of the United States. With the disease as known in other parts of the world, as in Sweden, where winter epidemics have prevailed, we were not then concerned, but now we shall venture to consider the facts established by our investigations in relation to the epidemiology of the disease as found there and in the neighborhood of New York, where the investigators of the Rockefeller Institute have done so much to forward the elucidation of the question of the origin of this disease of mystery, and where Flexner and Noguchi have recently identified the specific origin.

Let us not forget the primal fact that we are investigating a disease which was at one time sporadic only and almost entirely rural in incidence. Within a generation it has assumed epidemic form and invaded the cities more and more, but there is a general agreement that we are dealing with the same disease as of yore. If at this writing there had been no epidemic in any part of the world, and especially no urban invasion, we believe our announcement concerning the green fly and its victims would be received with acclaim, but one winter epidemic seems to offer an insuperable barrier to the acceptance of the theory of an insect origin.



Fig. 14.

To return to the study of our composite picture. As shown in the former paper, limber-neck of fowls is emphatically not a ptomain poisoning, for even before our laboratory experiments with the specific green fly larvae were begun it was proved by numerous observations in the field to have a vital continuity which could be attributed to the existence of a *contagium vivum* only.

As to the appalling destruction of hogs in the manner depicted, "it bears no more resemblance to hog cholera than it does to the moon," to use the language of one of our agricultural friends who had seen much of and suffered greatly from the ravages of the universally designated "hog cholera." The one is a wasting disease, surely preventable by the use of the serum; the other, the green fly epizootic, sweeps off 100 fat hogs in a night, leaving a few paralyzed old sows to tell the tale of how the others died. Hog cholera vaccination is of no avail here. Some authorities point triumphantly to the custom prevailing among farmers of feeding their limberneck fowl by the wheelbarrow load to the hogs, with impunity. This may be safely done for two days after the death of the fowl, provided only that no previously infected female green flies have had access to the carcasses. The innumerable instances in which fowl and hogs have all perished by paralytic death within a short period of time would afford *prima facie* evidence that there was a common cause at work.

Let us consider the objections to the almost universally received ochletic theory. They are so great as to have forced some of the authoritative writers to superadd the theory of polygenesis; in other words, to make the supposition that any acute infection could bring about the flaccid paralysis characteristic of poliomyelitis. There is much in favor of this theory, although we are not prepared to accept it as yet. We have seen cases simulating scarlet fever, with most profuse desquamation, which left the patient in a pitiable condition of flaccid paralysis. We have also seen such cases as this: An infant, seven months of age, had an attack of poliomyelitis in June, and recovered with typical paralysis of a few muscles. In the following March she had a severe attack of pneumonia, and recovered with most extensive flaccid paralysis. Another case presented a bizarre mixture of infantile paralysis and post-diphtheretic paralysis. These cases might lead us to believe that the virus of poliomyelitis, which we now know may linger in the system for an indefinite time, might be awakened into destructive activity by any intercurrent infection. Talbot reports an interesting case of recurrence after two years, a sister of the patient being attacked at the same time.

The mode of onset in a certain proportion of cases would seem almost to exclude the possibility of a primary infection at all, as in the two cases cited by Vulpinus, and as in such cases as we have all seen, where the paralysis was the first symptom, sometimes followed by more or less severe symptoms of an acute infection and sometimes not. There are other cogent reasons for declining to accept the theory of the primary and exclusive ochletic etiology of the disease.

Firstly, the rural incidence vastly exceeds the urban, not to the same extent, it is true, as a generation ago, when the disease was sporadic only. It advances on villages from the isolated and remote farms, and on the cities from the surrounding country, and after reaching the cities, it prevails in the suburbs rather than in the slums. Secondly, in the vast majority of cases in non-epidemic seasons, only one child in a family of several children is affected. In this, it would seem to conform to the analogy of rabies or tetanus. Even where several in a family are attacked the cases generally occur so closely



Fig. 15.

together in point of time as to preclude the supposition of infection of one child by another. The report of the Kansas State Board of Health for 1910 illustrates this point perfectly, but no better than many other published statistics. Reciting from memory, fifty-nine children were attacked, and these cases occurred in fifty-one families, representing 199 children. In only one case could any possible association be traced.

Could our analogues, tetanus and rabies, make a very different showing in regard to the question of etiologic classification, that is to say, whether

of human or alien character? Even snake bite might be considered under the same heading. The analogy derived from the subject of inoculated poliomyelitis in monkeys is against the theory of universal transmission by association. Only two experimenters, Levaditi and Patrusco, have succeeded in infecting a healthy monkey by very close association with a previous case of virulent Simian infection. All others have failed. Even in the matter of inoculation the results are entirely contrary to the theory of easy transmission by association. Ordinary inoculation is fruitless, and the methods of scarification of the nasal mucosa, intraperitoneal injections of large amounts of infective material, together with injection of the sciatic nerve, and intraspinal inoculation, are the only successful methods, and they not always so. The history of the disease as met with in generations past, that is in sporadic form, shows that no attempt at isolation of cases was made and yet it remained sporadic. Petersen records two instances of infection of nurses by patients. At the same time he does not state at what season these cases occurred, and the green fly might have been in evidence. In the Swedish reports, however, there are some incidents which very clearly prove human transmission, such as that of a man who visited Stockholm in the winter and returning home started a house epidemic. In one epidemic recorded in Sweden there were 287 cases in the month of December, and here we must admit a thoroughly humanized if not an originally human disease exhibiting an ochletic mode of transmission. At the same time if we study the epidemiology of that country from year to year we find that generally speaking the original centers of infection were located in the North and proceeded from isolated farms in the fly season. Although urban epidemics have now been observed for many years, it is still true that each fly season inaugurates a number of rural centers from which the disease again spreads. However, the green fly may account for some of the winter cases. As stated, this insect hibernates in human habitations ready to deposit its larvae on any food whenever the heat invites it to come forth. Not only so, but we must remember that many articles of food put up in the summertime contain fly larvae. One of us had a remarkable experience illustrating this point. A child and the grown members of the household were taken violently ill after partaking of crackers. The older members of the family suffered from what some of the physicians called ptomain poisoning and recovered promptly; but the child was left with flaccid paralysis of a number of muscle groups. A pet crow, which received some of the crackers, was found dead next morning. The supposition seems to be warranted that the package of crackers had been the seat of deposit of the green fly

larvae, which in time perished from lack of moisture and disintegrated, leaving the toxalbumose on the food. It is disgusting to realize how largely the larval fly enters into the diet of civilized man, but when we have learned the fearfully destructive potency of the green fly specific larvae the thought becomes appalling. The ant, as we all know, is the natural enemy of the fly, feeding on its larvae. It is conceivable that ants which have fed on specific larvae might bring the virus or the toxin or both into the pantry.

Examination into the regional incidence of the cases that come to the cities for orthopedic treatment reveals the fact that the vast majority come from the villages and the isolated farms, and many of them from sparsely settled regions. This is true now, many years after we have experienced the terrible epidemics which have prevailed in Europe and America. The epidemics seems to have originated in the far North, gradually extending southward. Why this is, it is difficult to imagine, unless we suppose that the infection of the green fly for some reason originated in the North. This theory of the green fly origin explains many mysterious cases of the disease occurring on fishing expeditions and outings.

I would refer to the previous paper published in *THE JOURNAL* of the Missouri State Medical Association for June, 1913, for instances illustrating these statements.

We were puzzled at one stage of our investigations to find that no limberneck poultry or hogs dying over night could be found on a farm previous to the development of a case of poliomyelitis, but in the sparrows we found the missing link. The most minute dose of the larval emulsion kills sparrows speedily. It is, of course, essential that the green fly should find an habitual victim in order to perpetuate the life-cycle of the infection of which it is the host. All animals, except the monkey, seem to be immune to the virus, but none apparently can resist the toxalbumose contained in the specific larvae. All insectivorous birds and all scavengers (coprophagous and ptomaphagous birds and mammals) are the legitimate prey of the green fly.

CHAPTER IV

The prevention of poliomyelitis and of the destruction of domestic animals by the green fly epizootic should be a very feasible task. Venomous reptiles, buzzards, rabid dogs, and flies in cities are all anachronisms. Vienna, Prague and Cleveland have demonstrated the possibility of exterminating the fly in every city and in every climate. The oviparous passion makes the green fly very easy to trap; these terrible insects, fortunately, do not seek to enter human habitations except under the conditions previously named. Every rural household, during the fly

season, should possess a fly-kitchen, placed between the kitchen and the poultry yard, where an improvised fireless cooker is kept, and cabbage is perpetually boiled by a vestal virgin. The garbage should be kept in the same place. The trap is arranged with over-lapping sections on all sides so that the flies can go in but cannot find their way out. A flame is applied to the imprisoned flies every day. Poison, which is so efficient in the destruction of the house-fly, might not avail with the green fly, as they seek to escape as soon as the eggs are deposited. The simple device of the fly kitchen would also free the house of the house-fly.

As urged in the previous paper, the buzzard could and should be exterminated within a week. The poultry and hogs should be watched, especially in the spring at the beginning of the fly season, and if any cases of limberneck or unexplained death occur, they should be kept penned up where they can be protected from the green fly larvae. In the finest poultry-yards in infected zones isolated cases will occur due to capture of an infected fly by the fowl. The manure pile should be screened throughout the summer. However, no amount of sanitation on the farm can exterminate the green fly for a whole season, because their numbers are constantly recruited from the wilds and from the importations. The precaution so universally urged on farmers of burying the carcasses is absolutely futile in preventing the spread of the green fly epizootic, as it has been found the fly larvae buried four feet under the surface can work their way to freedom within twenty-four hours. Every carcass therefore should be either burned or well roasted before burying.

It is to be devoutly hoped that the local health authorities and the government will adopt the most stringent measures against transportation of green flies by horses and by stock-cars. Every factory where food is put up should be rendered fly-proof. This can be done by screening windows from top to bottom and by constructing wire-screen vestibules outside of all doors. The ordinary screen door is at best only a partial protection as some flies of those lying in wait succeed in entering each time the door is opened, unless there be also a hanging reed-mat. Where there is a wire screen vestibule the flies cannot find the door, and if some attraction be placed at the side most remote from the door they will all congregate opposite this point. Above all things, everyone should know that the prevention of the dreaded disease of poliomyelitis is to be accomplished by seeing that nothing goes into a child's mouth that a fly could have contaminated, without submitting it to destructive heat. While in the laboratory 140 degrees continued for half an hour was found sufficient, instantaneous exposure to the heat of the flame or the oven, or

boiling of food which is then served under fly-proof conditions, will insure safety. One child on our list had the inveterate habit of taking a bite of fruit, then laying down out-of-doors and returning after some time to finish eating it. Baker's bread and every form of prepared food should pass through the oven or the flame before bringing it to the table. Children should not be allowed to eat out-of-doors, and picnics should be abolished except under the supervision of sanitary authorities.

It must not be forgotten that the green fly, while its instinct is overwhelmingly strong to deposit its larvae on the carcass of any animal, especially fish, or on cooked cabbage, yet in default of these objects will not hesitate to deposit in any animal or vegetable matter whatsoever. Specked fruit and tomatoes are dangerous. We can understand now why the peasants of Europe have suffered more than any other people. They have no screens and boil cabbage almost every day. They eat hot meat very seldom, but instead cold sausage and cold bread and cheese. Within two minutes after any table is set in the presence of an infected green fly some article of food may have 120 of the terrible larvae deposited on it.

If the annually recurring zones of infection in Europe and North America be abolished in 1914 by combating the green fly, it remains to be seen how much of the dread disease will be perpetuated through ophetic or indirect transmission.

In conclusion, the authors wish to acknowledge their indebtedness to the many men who have, either through their interest offered suggestions, or by actual work and observations on the animals have assisted, and especially to Dr. T. W. White of St. Louis, Dr. Frederick B. Bowman of Buffalo, who has given much of the micropathology; to Dr. Charles L. Klenk of St. Louis, who is working on the bacteriology, and to Dr. Wallace L. Baker of Buffalo, who has given his valuable time and skill to the autopsying of animals, and to others who have been most helpful in this work.

REPORT OF DR. PHIL. HOFFMANN, CHIEF PEDIATRIC SURGEON, BETHESDA INCURABLE HOSPITAL

Dec. 15, 1913, I first examined Monkey No. 6 and found him unable to actively lift his right arm at the shoulder joint, on account of paralysis of muscles controlling the shoulder. That the disability was not due to other cause than muscle weakness was shown by the fact that *passive* motion at the shoulder was free and painless in all directions, and that such passive movement met with less resistance on the affected than on the sound side. There was, also, definite moderate weakness, though not total paralysis of the muscles controlling the right elbow and hand, especially of the flexors of the wrist and fingers. The temperature of his right hand was distinctly lower than that of his left. The circumference of his right arm and forearm was less than that of his left, and the muscles not as firm.

Several hundred times, on different occasions, I placed bits of banana or apple in such a position as to

necessitate his lifting the upper arm in order to grasp them. Invariably he reached for them with his left hand. When they were placed conveniently near his right, he would turn his body to enable him to reach for them with his left.

The controllers of the hand and elbow gradually grew stronger and regained practically full power. There is still, however, nine millimeters circumferential atrophy over the muscle bellies of the right forearm, i. e., right 89 mm. left 98 mm.

To-day, March 5, 1914, the shoulder paralysis is still as complete as it was on December 15. There is atrophy of muscles about the right shoulder and beginning contracture of the healthy adductors of the arm, due to the long continued posture of adduction.

PHIL. HOFFMANN, M.D.

Feb. 9, 1914, I examined Monkey No. 9 and found marked weakness, though not complete paralysis of the extensors of his right wrist and hand. I again examined him on February 16 and found that these muscles had regained considerable strength, though they were still appreciably weakened. He died a few days later.

PHIL. HOFFMANN, M.D.

SURGICAL TREATMENT OF JOINT FRACTURES

ERNEST F. ROBINSON, M.D.

KANSAS CITY, MO.

While it is possible that the recent tendency toward the open operation of fractures has exceeded in some instances the limit of safety and efficiency, yet the conscientious surgeon cannot but admit that the open method has its proper place in modern surgical procedure. Especially is this true in the management of certain fractures about the joint. Since the first desideratum in the treatment of fractures is restoration of function, that method of treatment should be resorted to which most certainly and efficiently accomplishes this purpose. I wish, however, to distinctly emphasize this point: that not all joint fractures demand the open operation. In fact, just as in simple fractures, the great majority of them can be efficiently and safely treated by the intelligent use of properly applied external splints, casts and other retentive apparatus, aided by traction and extension. There are, on the other hand, other fractures into and near the joint that demand operative procedure to restore function and prevent crippling deformity. And these cases, it seems to my mind at least, should not be denied the benefit of modern aseptic surgery. It is to a consideration of some of these complicated and perplexing cases that I wish to direct your attention.

The first that I wish to present are some cases of the familiar Pott's fracture, with tearing off of the tip of the internal malleolus and a fracture of the lower end of the fibula. These cases are almost always accompanied by a rupture and separation of the interosseous ligament. This results in a widening of the joint with a flattened, wabby and almost useless ankle if treated by

external splints or casts alone. The procedure which I have followed in the past few months with most gratifying results has been the nailing of the broken fragments together. After reduction of the dislocation of the ankle-joint which usually accompanies this injury, a long wire nail

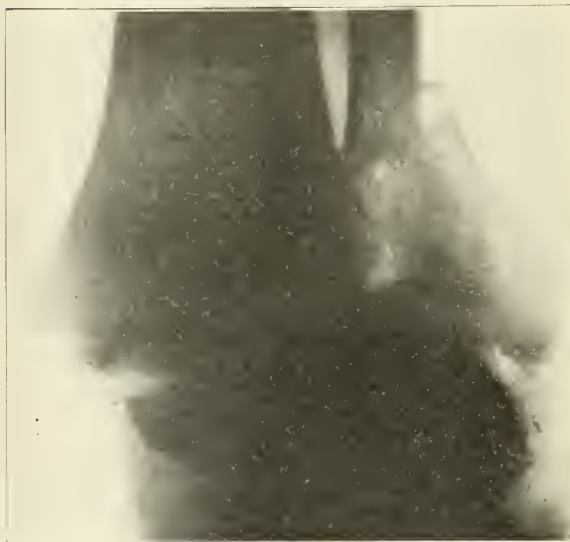


Fig. 1.—Pott's fracture.

is driven through the small fragment in such a manner that the joint surface is not encroached on, the nail securing a firm hold into the tibia itself. This prevents the astragalus from forcing or stretching the interosseous ligament, and the joint is not, in consequence, widened or flattened.

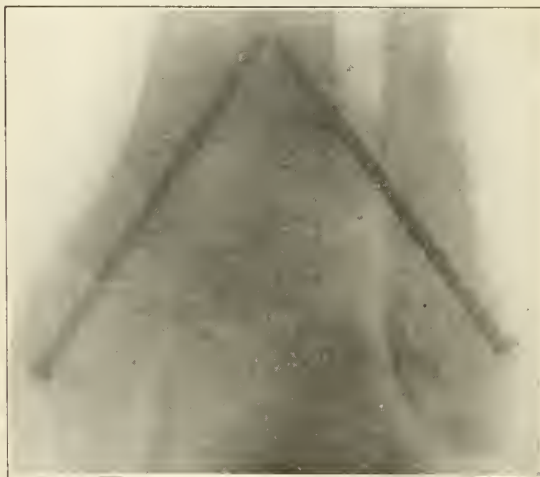


Fig. 2.—Same as Fig. 1, after nailing.

The accompanying x-ray photographs will illustrate the accurate restoration of the fragments. Function is completely and perfectly restored as is well illustrated by this patient (Burton). It has been my practice to remove these nails in eight or ten weeks, but this man left the hospital



Fig. 3.—Another Pott's fracture.

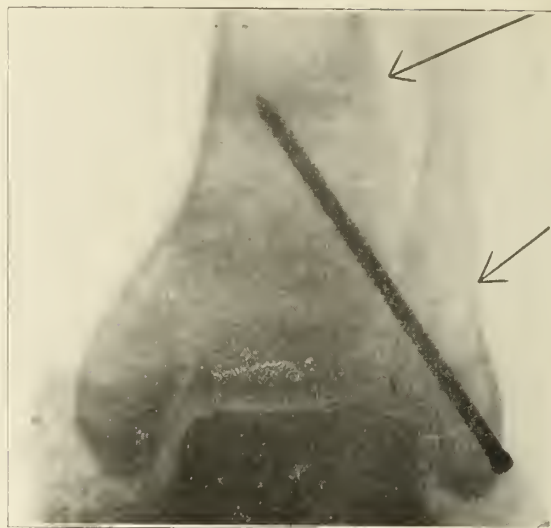


Fig. 6.—Multiple fracture of tibia held by one nail.



Fig. 4.—Fracture of tibia.



Fig. 7.—Fracture of astragalus with posterior dislocation.



Fig. 5.—Same as Fig. 4 after nailing.



Fig. 8.—Same as Fig. 7 after reduction.

and we lost track of him, the nails remaining in his ankle for several months. You can see he has perfect restoration of function.

My experience with resection or excision of the fragments of a broken and dislocated astragalus had been so disastrous in the past that I really hesitated to continue the practice. My former

A Colles' fracture can almost always be properly reduced by a competent surgeon with very little deformity or impairment of motion. Occasionally, however, owing to the peculiar nature of the break, its comminution or its improper reduction, the planes of the articulating surfaces are changed and must be corrected, or great loss of

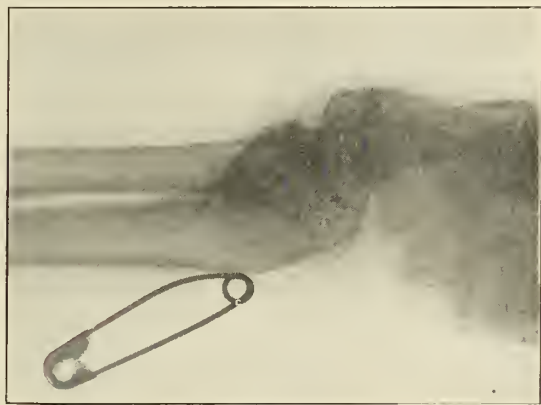


Fig. 9.—Colles' fracture.

cases all had flat, badly crippled ankles, and if they could get about at all were compelled to use a brace and cane. Consequently, when the case, whose x-ray photograph I here present, appeared with a fracture and posterior dislocation of the astragalus I resolved, despite the text-books and our former teaching, to cut into the joint and replace the broken fragment. With the aid of a "jimmie," or curved periosteal elevator, one side of which was roughened, I found this much easier to accomplish than I had feared. In fact, I was able to restore the fragment with very little traumatism and most accurately, as is seen



Fig. 10.—Same as Fig. 9 after operation.

by a glance at the x-ray picture. Much to my surprise, this loose fragment once replaced lived. The patient had no reaction or infection and to-day has a restored ankle-joint with no ankylosis. In this case I feel that some real surgical progress has been made.

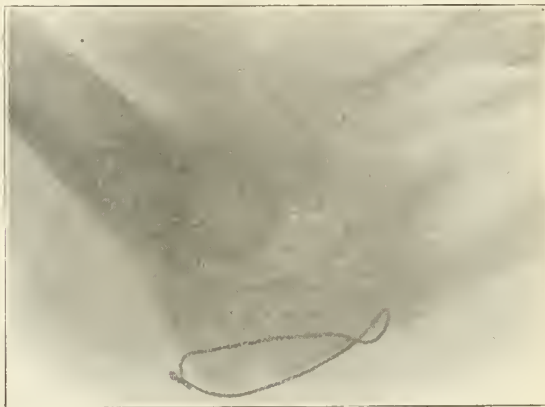


Fig. 11.—Double fracture of olecranon wired.

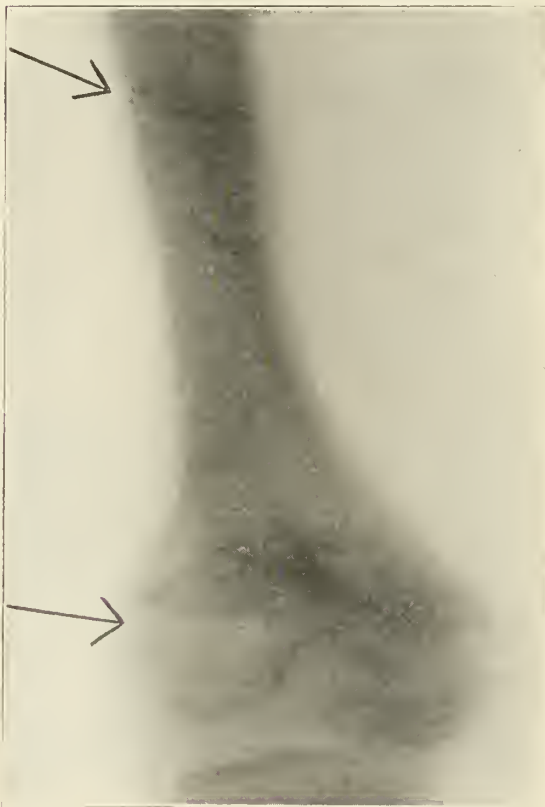


Fig. 12.—Fracture of femur wired and separation of epiphysis.

function with a painfully deformed joint must result. The x-ray photograph shows such a condition. You will note that the articulating end of the radius points upward. In this case a small incision was made on the radial side of the

wrist and a V-shaped piece of bone was removed, care being taken not to cut quite through the upper surface of the bone. The wrist and hand were now brought well downward, thus correcting the deformity. This patient secured a most useful hand.



Fig. 13.—Fracture of surgical neck of humerus.

With the wiring of a fractured olecranon and patella, all are familiar. There is no present difference of opinion in our ideas of the proper management of these cases. All agree that by far the most useful joint is secured by operation and wiring.

It is to the fracture and dislocation of the external or internal condyles; or the separation of the epiphysis about either condyle, that I wish to direct your attention. In these cases, with the elbow in extreme flexion, the displaced fragment



Fig. 14.—Same as Fig. 13 held by single wire nail.

should be replaced and held in proper position by a single fine wire nail. Only a $\frac{1}{2}$ -inch incision is necessary through the skin, which is closed with a single stitch after the nail is driven home.

Separation of the lower epiphysis of the femur is sometimes difficult to retain in position owing

to the fact that the small fragment rolls over and is displaced into the joint. The x-ray picture here presented is that of a small boy of 8 years, whose epiphysis was displaced and femur broken by a fall from a buggy, his leg being caught between the spokes. In this case, after wiring together the broken femur, as you can see from the x-ray, I opened the knee-joint, replaced the epiphysis with a strong hook and held it in place by two heavy kangaroo tendon sutures, put in through drill-holes in the bone. The result was perfect restoration of function without ankylosis. The leg has grown and developed as its uninjured fellow.

Fractures of the surgical neck of the humerus with dislocation of the head had given me great anxiety until I put into practice the suggestion of Dr. J. B. Murphy to hold the displaced head in place by an open operation. In the x-ray here presented one can readily see the perfect anatomical reduction of the deformity. In this case, after the head was replaced, the arm was extended and a nail driven obliquely through the



Fig. 15.—Orthoplasty of hip joint.

lower fragment into the upper. This single nail holds the bones perfectly. This patient had complete restoration of function.

It is rare, indeed, that operation is necessary in the usual case of ununited fracture of the hip-joint. This is especially true in the aged. In the young and vigorous, however, operation can be performed with most gratifying results, as the accompanying x-ray pictures demonstrate. The simple nailing of the ununited intracapsular fragment will not often suffice. Occasionally, a bone transplant in the shape of a long bone peg may give greater hope of success. In the cases where the complete bony ankylosis has resulted an arthroplasty of the hip-joint may be performed. The accompanying x-ray pictures show this procedure very accurately. The result was most satisfactory.

I hope to make a detailed report of a series of these cases at a future time.

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INTUSSUSCEPTION IN INFANTS *

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No apology should be demanded of me for reporting to you two successfully operated cases of intussusception in infants and even venturing to make a few observations on the diagnosis and treatment of such cases. It is a condition of such comparative rarity that it might seem best and more appropriate to consider something of much more frequent occurrence, but no doubt you will have made the observation as I have done, that a condition which at one time was apparently very rare became much more frequent after a general and better knowledge as to the diagnosis was in vogue. For instance, we no longer have patients dying from abscess and inflammation of the bowels. We must know the cause of the peritonitis. It seems strange that after a surgical experience of more than twenty years, and much of it in hospital service, I cannot recollect having operated or assisting in an operation for intussusception until my two recent cases, which I now report. I have no doubt that a good number of surgeons of extended experience have had no cases of intussusception. If so large a hospital as the Massachusetts General Hospital has an average of only one case a year, you can readily see that one might be an alternate in that service for a number of years and never have operated on a case. In Stone's report in 1908 the Children's Hospital, in the five years previous, had only 8 cases and the Infants' Hospital had 8 cases in the ten years previous. Ladd now reports his own and Stone's cases for the last four and one-half years in the same institutions to the number of 20. And again Clubbe of Australia reports more than 150 cases of his own. Now why this disparity between the experiences of the same surgeons at earlier and later dates, and why should one surgeon be able to report such a great number and others of equal ability and large experience have none to report. Clubbe's observation that "we seem to have educated our medical community in this matter" will no doubt explain much. We need more general knowledge about the diagnosis of this as well as other surgical conditions in the abdomen of infants, and when early diagnosis is made the infant mortality from operation will present a different picture. No more will we have infants dying from "locked" bowels. The frightful and discouraging mortality of 90 per cent. will become a disgrace to any hospital or operator, or more properly to the physician who fails to bring the case early for operation. Ladd in analyzing his 20 cases has clearly shown what is the crux of the situation. Ladd and Stone with their previous experience had a mortality of 90 per cent., and with the 20 cases last reported reduced the mortal-

ity to 45 per cent., due to better and earlier consultation and diagnosis on the part of the general practitioner. Clubbe's first 50 cases had a mortality of 50 per cent. His last 50 cases had a mortality of 8 per cent. The average duration of symptoms in Clubbe's last 50 cases was 17 hours. Ladd and Stone lost none of their cases that were operated under 48 hours. Only one case survived operation after that time.

Then it would seem that the most important consideration in this matter is the making of an early diagnosis. Operation is comparatively easy if early. Also diagnosis is not difficult. Much failure is due to careless methods of examination and the habit of treating babies for digestive disturbances without making proper physical examination; failure to realize the significance of evident abdominal pain. Some will procrastinate from habit and will wait for classical signs. They want the complete picture of an infant with sudden severe attacks of pain, tenesmus, bloody, mucous stools, abdominal tumor and perhaps a thready pulse, a distended belly, a pinched and pallid countenance, with sunken eyes. Our classical text-book picture is of a moribund baby. No more should we demand all these signs than we should expect to see all the classical signs in a typhoid fever case to make a diagnosis. We should make the diagnosis early and if we may have an operation in this condition before 24 or 36 hours have elapsed we will get equally as good results as we may have from any other obstructive condition, and the infant mortality should not be more than a fraction greater than the adult mortality in conditions of equal gravity. A well baby from three to twelve months old, perhaps at weaning-time or changing food, is taken with sudden severe paroxysmal pains with intervals of comfort; then comes the vomiting, bowels evacuated, and a little later bloody, mucous stools. Perhaps distinct peristaltic waves are seen and felt, and a mass at the cecum, ascending, or transverse colon. With such a picture, call your surgeon and have early and successful operation. Procrastinate a day or two longer and have added to this picture the exhausted little sufferer still writhing and twisting in torture if his strength is not all gone, with his pallid face and sunken eyes, a thready little pulse and distended belly—might as well call the undertaker.

I speak of intussusception in infants only. Three-fourths of all cases are under one year old and 65 per cent. come between the fourth and seventh months. The trouble often coincides with a change in diet or weaning. What might be the cause? Make your own hypothesis or let others do it for you if you like. No abdominal organ is at present more hypothetical than the somersaulting cecum. Yes a "cecum mobil," a polypus or tumor, a Meckel's, an appendix, a dose of castor-oil—any of these may play a part, and have done so. Usually the ileum gets in and

* Read at the Medical Association of the Southwest, Kansas City, Mo., October, 1913.

become a part at least of the intussusceptum and the cecum or colon acts as the intussusciens. Well, suppose we have made our diagnosis, what then? An abdominal section at the earliest possible moment, and deal with the condition found with all the celerity and skill at your command. There should be no procrastination, no temporizing or dilating the bowel with water and gravity. It is purely and absolutely an emergency surgical case. A median or right rectus incision—gentle taxis at the apex of the intussusceptum, and exceedingly gentle if any traction on intussusciens—a reduction perhaps and judgment as to viability. A resection if not viable, or a Jessett's operation if irreducible. Removal of an appendix or Meckel's diverticulum, drainage of a paralyzed bowel or an infected peritoneum, fixation of too mobile cecum—such are some of the conditions to be met both skilfully and quickly.

CASE 1.—W. H., white, male child 11 months old, who had had no previous illness became suddenly ill Sept. 19, 1910, at 7 p. m. He first began crying and suffered great abdominal pain. At 10 p. m., after an enema, he passed blood and vomited. From this time he continued to vomit and pass small amounts of mucus and blood from the rectum accompanied with much tenesmus. No fecal movement. I saw him first the next evening, September 20, with Dr. Shaefer, the family physician, and noted the intense suffering. The pain would come on in paroxysms, when he would turn and twist himself in various contortions. The belly was tense and rigid and nothing had passed but blood. Castor oil had been administered early without effect. He continued to have occasional vomiting, which was not fecal. We could easily make a diagnosis of intussusception and advised immediate operation. He was taken to the hospital and preparation made to operate. At 11 p. m., twenty-eight hours after onset of symptoms I made a median section and found the ileum invaginated into the cecum to the length of 6 inches, with some inversion of the head of cecum also. It was reduced with considerable difficulty and for some time it was doubtful if there would be sufficient reaction in the bowel. However, it reacted and the abdomen was closed, thirty minutes being the total time used. He left the table with considerable shock but came out rapidly when he did begin to react. He made a recovery without casualty. Great care was exercised with his diet for some time afterward. He had begun to take solid food only a short time before the trouble came on.

CASE 2.—D. McK., male, white, 10 months old; had never had any previous illness; on June 5 and 6, 1913, began to have diarrhea and cramping. Physicians attended and gave remedies for disturbed digestion. Saturday, June 7, he was still more fretful and suffering at times. About 12 m., he seemed to have much more pain, with much crying and straining at stool and some bloody mucus noticed for the first time. No fecal matter was passing. From that time on he continued to cry, strain at stool, vomit, pass blood and mucus and writhe and twist about on the bed. A diagnosis of possible intussusception was made by Drs. Lewis and Calvert in attendance. I was called in consultation the next day 5 p. m. Noted the little patient performing his various contortions in effort to get away from his pain. A favorite position for him was on his knees and chest. The bed was stained with bloody mucus. His belly was tense and rigid and could see no peristaltic waves. The left abdomen seemed a little fuller and a mass could be

felt filling most of the left half. The little finger in the rectum could feel the apex of the intussusceptum not two inches from the anus. Advised immediate operation and he was taken to hospital at once. Operation 6 p. m. On opening the abdomen we found the swollen intussusciens in the left half of the abdomen and with some difficulty got our bearings by tracing the ileum to the entrance of the mass. The ileum, cecum and transverse colon were invaginated into the descending colon and sigmoid. It took careful taxis and gentle traction, and then we almost despaired of moving it, but it was finally reduced. The cecum seemed to be the apex of the intussusceptum and was reduced with the most difficulty. A part of it persisted in staying inverted. The cecum was freely movable but we made no effort to fix it. Patient suffering from much shock. Much damage to the stretched mesentery and mesocolon. A question if bowel was viable, but patient could stand no more manipulation. Profoundly shocked but quickly reacted. Made a recovery without accident. You will note that this baby was ill four days. The time from the more violent symptoms and blood in stools to operation was thirty hours.

Sept. 6, 1913, was informed this child had again been operated on in Boulder, Colo., with symptoms of obstruction of bowels. Not an intussusception returned but occlusion from contracting bands. Constriction at jejuno-ileal and near ileo-cecal junctions. Oct. 6, 1913, child returned home in good condition.

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LUKE THE GREEK PHYSICIAN

PART IV

HIS PLACE IN MEDICINE, WITH REMARKS ON FAITH-HEALING, REPUTED MEDICAL MIRACLES AND LIKE PHENOMENA (CONCLUDED)

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ST. LOUIS

Although some demur is still made there seems to be no good reason for doubting the correctness of the statements made by those qualified to speak, that Luke, who is credited with the authorship of the gospel which bears his name and the Acts, was a physician well trained in the school of Hippocratic medicine, which had flourished for centuries before his time in Greece, its colonies and dependencies.

The testimony in support of this view is drawn from two sources: (1) The settled traditions of the early church supported as they are by direct statements contained in the apostolic writings, and (2) the technical and professional character of many of the terms and expressions in the gospel and Acts attributed to Luke, used in describing medical and surgical conditions and appearances, which are in scientific accord with the writings of the best medical authorities of that and earlier ages, and which style of expression is found nowhere else in the new testament. As the evidence thus afforded has been ably put forward by ecclesiastical writers no charge of bias toward a medical cause can be made, as might be the case if physicians only had defended Luke's claim, although support from skilled medical sources to this end has not been lacking.

Therefore this question may be considered as settled in the affirmative by weight of testimony,

and the next step within the scope of this inquiry would be to ascertain the means and opportunities open to those seeking a Greek medical education some two thousand years ago. This phase has already been discussed and the opinions of Harnack and Naylor were freely quoted by me to show the scientific competency of such teachings, it being made clear by them that this schooling was in keeping with the thoroughness which characterized the work of the Greeks in this and every other intellectual direction.

It must be admitted, of course, that there is nothing at hand to show the place where Luke received this instruction, the time there spent, nor the extent of his studies, direct proofs being lacking as is the case with so many of the other personalities associated with him in the development of a religious cause in an epochal period of the world's history; but the conclusion of experts, drawn from a study of known facts, is that he was well-equipped scientifically for his professional labors.

In order to strengthen this reasonable conjecture it may be well briefly to notice the groundwork of Greek character and citizenship during the centuries preceding that time—economic, social, political and religious—in order to see whether inferential conclusions may safely be drawn from principles of national consciousness and conduct for application to specific or individual instances.

As bearing directly on and illuminating the conditions of Greek civilization I quote from Boeckh,¹ as follows:

"Everything is subject to the intelligent spirit. This secured to the Athenians a high rank among the nations of the world's history. It was this which enabled a small band to become victorious . . . at Marathon, Salamis and Plataea. . . . From the bloody seed sprung a race which the spirit of the dead inflamed to new intrepid deeds. Through the same energy of mind a small band of citizens, a single city acquired the dominion over thousands. . . . In infinite fulness and methodical variety the flower of art at the same time developed itself to enhance the pleasures and to refine the enjoyments of life; and the wise drew out of the deep fountains of their souls and of nature, eternal thoughts of God."

Francis Galton has been quoted to the effect that "a population of ninety thousand produced two men, Socrates and Plato, whom the whole population of Europe has never equaled, and fourteen men of an ability of which the Anglo-Saxon race has only produced, in two thousand years, five equals."

The words of Pericles, spoken of the social and political features of the Athenian commonwealth more than five hundred years before Christianity was heard of, have never been successfully denied. And it should be remembered that underlying this civilization and a necessary part of it was a system of just taxation unknown elsewhere and

1. Introduction to "Public Economy of the Athenians."

deliberately disregarded to-day which allowed no private monopoly of public utilities or special privileges, each citizen receiving the full measure of his earnings in the line of work that best suited his taste and capacities. He said:

"We are happy in a form of government which . . . is original at Athens. And this our form, as committed not to the few, but to the whole body of the people, is called a democracy. How different soever in a private capacity, we all enjoy the same general equality our laws are fitted to preserve; and superior honors just as we excel. The public administration . . . is attainable only by merit. Poverty is not a hindrance since whoever is able to serve his country, meets with no obstacle to preferment from his first obscurity."

The beginnings and growth of the national religion of the Hellenes were as striking as were the other characteristics of this remarkable race. As bearing on this point I quote the following:²

"Greek religion differed from the now existing religions of the world in its origin and development. It had no founder. Its sanction was not the ipse dixit of some inspired teacher. . . . It was a free . . . growth, evolved from the various hopes and fears of a whole people. . . . Great teachers indeed arose, like Orpheus, advocating special doctrines and imposing on their followers, special rules of life. Great centers of religious influence developed, such as Delphi, exercising a general control over rites and ceremonies. But no single preacher, no priesthood, succeeded in dominating over the free conscience of the people. Nothing was imposed by authority. In belief and in worship each man was a law unto himself; and so far as there were any accepted doctrines and established observances, these were not the subtle inventions of professional theologians or an interested priesthood, but were based upon the hereditary and innate convictions of the whole Greek race. The individual was free to believe what he would and what he could. (P. 2.)

"No people have evinced greater liberty of thought on religious matters; no people have been less hampered by hierarchial limitations and the claims of authority; nowhere else have the advocates of material philosophies and of spiritual philosophies been brought into sharper contrast and yet held in equal repute." (P. 527.)

Upon the bedrock of these eternal principles the Greek state was reared by the minds and hands of its citizens, as individuals, reaching to a sovereignty of intellect and imagination which makes the thought of that age even now still fresh and true and sound; kindling a torch to which every nation has been compelled to turn, whose rays illumine the paths of all seekers after knowledge and truth to-day, and whose persistence into ages yet to come can hardly be doubted.

Such then being the moral, mental and religious heritage of Luke through many generations, the quality and breadth of his intelligence, taken in connection with his calling as a physician, fitted him to hear with sympathy and understand-

ing the doctrine of the Galilean, and to become the best exponent of the new faith in its early and unperverted form; that which has been termed an unclouded clearness of mind enabling him to commend to the Western mentality the Oriental imageries, legends, romances and mysticisms of the elder religions out of which in the fulness of time Christianity naturally grew.

That the medical career of Luke does not stand out more clearly is due alike to the peculiarities of his own times and to the indisposition of the early church; and a demand from the latter source for proofs to establish his complete medical character hardly comes with good grace inasmuch as organized Christianity for many centuries showed but small interest in medical science, or, for that matter, any of the natural sciences. The details of Luke's professional work at Antioch, Tarsus, Phillippi, Malta, Rome or Ephesus, if recorded, were perhaps but lightly regarded by ecclesiastical authority as the church was struggling to establish itself as a state religion—later becoming intoxicated with the exercise of political power, and in the Dark Ages deeply obsessed with the nightmare that the end of the world was near at hand. The practical effect of this situation was that the natural sciences found not only sanctuary but support and sympathy under the Crescent that was withheld from them by Christendom—Arabians, Persians, Saracens and Moors alike joining in this beneficence toward learning and literature; and scientific medicine in important directions owes gratefully its debt to Mohammedan favor and protection.* It has been said on fair authority that the word "brain" does not occur within the lids of the Bible; and as the science of medicine must have its seat in that organ, if anywhere, the slight importance attached to rational medicine by most of the Christian apostles and advocates is easily understood. Religious sensibility chose by metonymy to locate pious emotions in the heart, liver, bowels, reins, etc., but never traced them to a cerebral source. Therefore, as the human brain is the only organ vouchsafed by the Creator to the creature whereby such a relationship can in any degree be conceived of, is it not most fitting and necessary that those who feel themselves called on to declare the ways of God to man should first study that organ with the greatest care, as anatomists, physiologists, psychologists and pathologists—noting changes in substance, form, fiber and cell—and reading from it the real messages of man's Maker as given from generation to generation, thus affording a sure groundwork for spiritual speculation and religious enthusiasm; in short achieve the wedding of sound physics with sane psychics in an ecclesiastical sense!

2. Modern Greek Folklore and Ancient Greek Religion—John Cuthbert Layman, M.A., etc., Cambridge University Press, 1910.

* After the closure of the Hippocratic schools the first college for medical teaching in Europe was founded at Salerno, Italy, in the 11th century, through the efforts of enlightened Mohammedan and Jewish scholars.

The later critics seem to agree that the order in which the four books of gospels were written was Mark, Luke, Matthew, John, the Acts by Luke following his gospel. There is not the same agreement as to the time of the appearance of what are thought to be the writings of Luke, Harnack³ holding that the date should be about 50 A. D., while Pfeleiderer thinks the time could not "fall earlier than the beginning of the second century." He further believes that the hand of another than the Greek physician used Luke's records of travel and other evangelistic material in the works which tradition attributes to Luke himself. This supposed compiler or editor is described by Professor Pfeleiderer⁴ as

"a Gentile Christian of post-apostolic times, and probably a member of the Roman church, among whose archives he may have found the Lucan travel memoirs. He was, moreover, a man of literary culture, well acquainted with the writings of Josephus, and of remarkable literary talent, who understood admirably how to present . . . the beginnings of Christianity in a form which would not only appeal to Christians but was calculated to attract and convince the Greco-Roman world. His work does not, indeed, consist of history in the modern sense of the term, but of "truth and poetic imagination" . . . in accordance with the tastes and ideas of his time and with the way history was generally written at that period. And it is precisely this mixture of truth and imagination, . . . this sublimation of the reality into the ideal world of faith, that gives the Lucan writings the incomparable value which they have had for the Christianity of all ages, and which they still retain."

If the foregoing view of Luke and his work can be maintained it will tend to lift from his memory the imputation of apostasy to Greek medical thought and teaching brought against him with some force from clerical sources; for the hand of the compiler, in obedience to the conceived needs of primitive Christianity, must have seriously misjudged the spirit and character of Luke when he placed him in the attitude of countenancing the superstitious obsessions and outstanding belief in demonism of Paul, Peter and others—whose sole use for Hippocratic doctrine was the hope thereby to buttress by asserted miraculous healings the claim to supernatural powers in the new faith—an accusation implying such moral contradictions in the scientific Greek character that it would seem that it must fall of its own weight as lacking in due support.

The gospel and Acts of Luke are set with gems whose brilliancy argues a genius of the first order, whose powers were exercised over a wide range of themes some of which are decidedly medical in nature although for reasons before stated the scientific quality of these showings has been ecclesiastically slighted or ignored. Many of the literary masterpieces of the faith are found in Luke alone, such as the event at Bethlehem, the prodigal son, the good Samaritan, the grateful

leper, the legend of Emmaus, Dives and Lazarus, the woman of Samaria, and many others; and even when he borrows thought or theme the rule is that his touch both dignifies and adorns the story as thus newly told. Every one of his epics shows nobility of thought and lofty diction whether the theme be medical, dramatic, poetic, philosophic or other distinction as the case may be.

While his contemporaries in medical teaching or practice as Celsus, Dioscorides, Aretaeus, and later, Galen, were fortunate in leaving to future ages writings which deal with the precepts and performance of their times, so far as known no such heritage was bequeathed to us by Luke; but the opinion may be hazarded that one who was so great in other fields and who was so well grounded in Hippocratic medicine could, had circumstances permitted, have shown no less ability in this respect. He wrought in medicine so well that he earned the title of the Beloved Physician, equally significant and touching, and the world generally has willingly conceded this to be his by right that no one may question.

His birthplace and early home, Antioch, Syria, seems, next to Jerusalem, to have been a storm center of the new religion, and the clashes of policy and conflicts of opinion there between some of his fellow apostles must have been spirited to say the least, although the account by Luke tones down all such occurrences as much as possible. It seems probable that Luke first came into medical touch there with some of the men who became prominent in the new cause. Later, when it was conceived that a call for missionary service had been heard from Macedonia, a company was formed of whom Paul was one and the mission duly undertaken, Luke joining the company later at Troas and continuing with it for some time.

It is said the modern dramatic stage had its beginning about that time and in the shadow of the church, and if this be true it may also be true that the miracle-plays of later times, which were closely connected with religious belief, date from the example set by this company of traveling evangelists. The dramatic instinct of Luke, always very strong in the Greek nature, may have given to this tour just such a coloring, for in the narrative mention is made of many happenings sustaining this view. Events showing pathos, tragedy, sentiment, romance, melodrama or comedy in connection with meetings held in forums, temples, synagogues, market-places and upper chambers bear out this probability although the style of narration is cautious and discreet. The provincial touring experiences of Molière during the infancy of the French drama would seem to support the correctness of the suggestion herein made. Luke's tactful address and love of peace, which is not seldom evident, point to him as being the guiding influence in this under-

3. Luke the Physician, 1907, p. 152.

4. Primitive Christianity, Vol. II, p. 300.

taking, and such details of the tour as appear show skilful management in the assignment of rôles and arrangement of the work.

When from out of the mysterious East there came those devotional and doctrinal elements which, through the preaching of the Galilean, were to be combined in a religion broadly humane and exalted in spirit, and whose founder prophetic fervor declared should be called the Prince of Peace, the world had been prepared in a measure for its coming through many influences of diverse form. The wise attitude of imperial Rome in respecting every form of religion found within its borders was a factor of importance by placing all on the same plane under civil law, and the effect was to modify many previously existing religious asperities and prejudices. Even the high but narrow and self-centered conception of the Deity as a stern lawgiver under Mosaic doctrine became, among the Jews themselves, so tempered and softened as to take on rather the form of fatherhood, and this view was quite familiar to the founder of what is known as Christianity.

Palestine under such a regime became a natural meeting place for the Greek religion with its broad tolerance and wise moderation, for the faith of Buddha as well with its equally broad merciful humanity and more potent appeal to purely human instinct and sympathies and, also, the compelling doctrines drawn from Egyptian religious belief. The soil was ready for the seed which in part took the form of peace on earth, good will toward men; and, some time after the tragedy that closed the human career of the sower, this message struck a responsive chord in the intellect and imagination of Luke the Physician, who gave it forth to the world in a form that can never be forgotten, however convenient it may be to some to have these teachings belittled or ignored; for it looks to-day as if an insane bloodlust fed by commercial greed and cloaked with pious deception possesses what is called the civilized world. The dogs of war are howling, as perhaps never before, in the capital of every nation that styles itself Christian, their hoarse cries calling for yearly budgets rising into the hundred million dollars for larger armies and more and bigger battle-ships, while conventional or officialized piety, claiming the right to use the names of the Galilean teacher and the Greek apostle, looks on this monstrous spectacle in silence extending sufferance if not sanction, so that it becomes difficult for the plain man to identify Christianity to-day with the religion of Jesus and Luke. That religion, if it is to stand at all, must stand four-square to all the world on the foundation stones of the golden rule, the eleventh commandment, the message of Bethlehem, and the Lord's prayer, all of these in their best form being found in Luke's gospel.

Many theologians of the church have argued at length and with much learning to show that

Paul was a superior influence in the spread of the spirit of Christianity, while but little is said of Luke in this respect. The answers to two simple questions may perhaps serve to clear this situation, and show that of the two the Greek physician had the surer sense of human motives and the truer insight of human nature, the suggested queries being:

What would Christianity have been without Christmas?

Who but Luke was responsible for this feature of that religion?

An observation suggested by elemental human nature would be that while Paul, by pleas based on theological subtleties and doctrinal deductions, might gain the assent of one man, the simple beauty and power of the epic of Bethlehem by Luke would, in the same time, win the sympathies of scores of women and children by the appeal it made to the sensibilities through which religious feelings ever find expression, be the mothers of those children white, black, red, yellow or brown, the fundamentals of humanity being at all times and everywhere the same. That this assertion is true is shown by what took place in China through the extension into that country of the religion of Buddha, for, while many of the men of China held to the faith of Confucius, the women generally favored the other religion being drawn to it by the doctrine of the virgin birth of a Supreme Being in the form of a child, the appeal thus made to their sympathetic emotions being irresistible, and observers of Chinese character and customs say that this situation has existed since the early centuries of both religions.

The true causes of observed effects are not always open to the eye, and as tending to throw light on the comparative values of the religious rôles played by these two men a Hebrew legend will be instanced (1 Kings, XIX). In order that he might be taught a lesson in patience, and as well to show him that the real forces at work in the world are not those that produce the most noise or disturbance in nature, one of the old-time prophets received the command:

"Go forth and stand upon the Mount before the Lord." And behold . . . and a great and strong wind rent the mountains, and brake in pieces the rocks . . . but the Lord was not in the wind; and after the wind an earthquake; but the Lord was not in the earthquake; and after the earthquake a fire; but the Lord was not in the fire; and after the fire a still small voice . . . and said, "What doest thou here?"

The voice and hand of Luke the Physician gave the message with which he was entrusted to the world with a greater charm, more of innocent pleasure and less of pain to mankind than probably any other known form of religious belief, and, in so doing he was, as ever, faithful alike to his Hippocratic oath and apostolic vow; but that the field of the world was hardly prepared for such a religion was foreshown in a measure

by Luke's own words: "A sower went forth to sow his seed and as he sowed some fell by the way-side and it was trodden down, and some fell upon a rock and as soon as it was sprung up it withered away because it lacked moisture, and some fell among thorns, and the thorns sprang up and choked it, and other fell on good ground and sprang up and bore fruit an hundredfold."

Odd Fellows' Building.

THE RELATION OF ATMOSPHERIC AIR TO TUBERCULOSIS *

HERBERT LEE, M.D.
ST. JOSEPH, MO.

The study of the atmosphere may be conveniently divided into different phases. It can be studied from a mechanical standpoint, from a chemical one, or from a vital one. It has mechanical influence on the tissues, organs and bodies of all living things, and its various movements and its pressures, with their effects on individual life, at different altitudes, have been elaborately described and estimated. It has a chemical bearing in the changes produced in the blood, principally by its power of oxidation. Its vital force is clearly illustrated in the growth and life both of animals and plants, and is so interwoven with the mechanical and chemical changes that each phase constantly overlaps.

The atmosphere is never at rest. Nearly every force in Nature is at work to keep it moving. Heat causes rarefaction, and its consequent ascent to higher levels; sound causes the vibration of its component atoms, and the force of the wind causes endless movements in all directions. Even the attraction of gravity is necessary to hold the air close to earth and counteract the expansive force of its gases.

In different localities at the same time, and in the same place at different times, we find every conceivable variation in the density, humidity and temperature of the atmosphere, which is still further modified by the action of electricity producing ozone, and, to some extent, combining its constituent gases into nitrous oxid. Solar light also effects the atmosphere, principally by its action on the leaves of plants, breaking down carbon dioxid and liberating free oxygen.

Plant life requires for its well-being an abundance of fresh air and plenty of sunlight. Plants become dwarfed or die where they are crowded, but expand their leaves and flourish where they have ample space to spread and grow. This truth applies equally to human life; for a pent-up stale atmosphere is always unhealthy, and favors the spread of disease, especially the contagion of

tuberculosis. The fact is commonly known that the crowding together of many persons in churches, in theaters, at public receptions or elsewhere indoors, without adequate provision being made for proper ventilation, engenders a vitiated atmosphere, the breathing of which weakens each individual's power of vital resistance to the inroads of infectious micro-organisms, particularly by way of the respiratory tract.

Dust is the most common impurity of the atmosphere. It may be caught up and distributed by the wind or scattered either by birds or insects in their flight. The minute floating particles in the air can be made plainly visible to the naked eye by passing a narrow band of sunlight through a shutter into a dark room. In the year 1875 John Tyndall showed, by an interesting experiment, that absolutely pure air, when freed from all dust and moisture by means of suitable apparatus, was opaque to the state of blackness. He used his own breath to illustrate the experiment and found that an extraordinary darkness was produced by the expired air *toward the end of respiration*. He therefore concluded that "the deeper air of the lungs was proved to be absolutely free from suspended matter."

Men and women are engaged in many trades which either shorten their lives, or cause them suffering by inhaling a dust-laden atmosphere. The mechanical irritation alone is prejudicial, through its liability to injure the lung tissue, and thus render it more susceptible to infection. Coal dust is known to deposit itself in the lungs of both mine workers and stokers; stony grit can be found in the lungs of stone-cutters after their death, and the bad effects of dust arising from the sorting either of seeds or type, or from mineral powders used in other industries, are familiar examples. Even housekeepers, when sweeping the floors of their homes, may inhale enough dust to prove harmful.

A dust-free atmosphere is never found in Nature, neither is it easy to obtain by artificial means. However, where work has to be done in a dusty atmosphere, the use of a simply-made respirator, packed either with absorbent cotton or coarsely powdered carbon, will always relieve, and often entirely obviate, the distress or injury of the breathing-passages. Mixed in with the dust, caught in the meshes of such a respirator, both pathogenic and non-pathogenic varieties of bacteria will be found; for a germ-free atmosphere is only known at extremely high elevations and in mid-ocean.

Bacteriologically, the air is purer early in the morning than later in the day; after a rain than before one; in the open country than in the city, and out of doors than in the house. Over a dry, well-drained soil the air is purer than over a damp, ill-drained one, and there is a well-marked ratio between the suspended matter in the air

* Read before the St. Joseph-Buchanan-Andrew County Medical Society, Jan. 21, 1914.

and the places over which the wind has recently passed.

A cold, damp atmosphere is peculiarly favorable to the ravages of the *Bacillus tuberculosis*. This state of cold dampness, combined with the absence of sunlight, was formerly a common condition in the dungeons of the feudal lords of Europe during the middle ages. There are still a few jails left in the world where the old conditions show but little improvement. They are ideal places for the rapid spread of consumption. Previously healthy men cannot long endure these unfavorable conditions, which lessen their ability to combat any chance infection of tuberculosis.

Occasional impurities of the atmosphere come from the smoke of burning substances; the chimneys of factories, locomotives and steamships; the fumes and vapors arising from chemical and smelting works; nauseating or pleasant odors of animals, insects or plants; the gases emanating from sewers, or from any other form of decomposing organic matter. These impurities are usually transient in character, and may or may not prove injurious to the health of those who inhale them, according to their quality, quantity, or the length of time during which they are breathed. Thus, a little tobacco smoke is harmless, but a single whiff of seleniuretted hydrogen will cause all the symptoms of a bad cold, which persists for several hours. However, the old belief in the bad effects of sewer and other foul-smelling gases is not entirely based on facts, and has been grossly exaggerated, as the rottenness of an odor has but an insignificant relation with its power to produce disease. The real danger lies in the presence of pathogenic bacteria concealed in the dust of the atmosphere. The presence of pathogenic bacteria in the air has been demonstrated by special methods, notably the aëroscope devised by Sedgewick and Tucker. With this instrument the number of bacteria, at any given time or place, can be reliably estimated. Average city air has been found to contain from 100 to 1,000 bacteria, of all kinds, per cubic meter. However, according to Joseph McFarland, the discovery of some particular variety of bacteria is of greater importance than estimating the number per meter, as immense numbers of those usually present are of a non-pathogenic nature.

To review the facts at present known in regard to the atmosphere and its influence on tuberculosis, they are of two descriptions: First, those pertaining to the methods of contracting the disease by inhaling a vitiated atmosphere. Secondly, the manner in which a pure atmosphere may prove beneficial in either checking the onset and development, or relieving or curing the disease.

We know that one of the chief avenues of infection for the *Bacillus tuberculosis* is through

the respiratory tract, from inhaling a dusty atmosphere containing the micro-organisms.

We know that while the inhalation of a consumptive's breath at a greater distance than half a meter is rarely harmful, yet his dried sputum easily mixes with the dust of the air, and thus becomes an imminent source of danger.

We know that a cold, damp atmosphere favors the spread of the disease by reducing the infected individual's power of vital resistance, while a dry, rare atmosphere, without much regard to its temperature, is prejudicial to the propagation of the *Bacillus tuberculosis*.

We know that at reasonably high altitudes, where the pressure of the atmosphere is reduced, both the pulse beat and respiration naturally become quicker, and that this effort on the part of heart and lungs to faster action increases their capacity and force, in the same manner that the muscles enlarge when extra work is thrown on them, and that these conditions prove helpful to the consumptive by aiding his strength in combating the disease.

On a number of other points our knowledge is not yet so clear and well defined. For example, is the fragrance of the rose beneficial, or the odor of sulphuretted hydrogen actually harmful? How do the meteorological changes, brought about by a thunder-storm, affect the well-being of the consumptive? What shall we say of the magnetism in the air? Electricians have measured it, and find it greater at some times and in some places than at others, but we know little of its relation to either health or disease. These, and like questions crowd themselves on our minds, and await intelligent answers. It is certain that no force, however slight, is ever entirely lost in nature, and that the consumptive's chances for good or ill contained in the atmosphere show an almost endless number of apparently cross purposes. Without doubt the equilibrium, or balance, of all the opposing forces is the ultimate outcome, and this may mean to one and the same individual, to-day, the breath of life, and, perchance, to-morrow, the dark shadow of the valley of death. The extreme restlessness of the atmosphere has ever prohibited mankind from permanently taming it to do his bidding. The gentle breezes of one hour are often converted into the cyclone or the hurricane of a few hours later. The wind which wafts the sailors' ship safely into port one day may change and dash it to pieces on the rocks the next. Seemingly, the atmosphere is inconstant, and refuses to obey any set of rules. It is, in like manner, capricious with the unfortunate individual afflicted with consumption; but our knowledge of its influence is rapidly gaining ground, and has already proved of great benefit in relieving suffering humanity.

Woodson's Sanitarium.

PRESIDENT'S ADDRESS

R. L. SUTTON, M.D.
KANSAS CITY, MO.

The progress of this society during the past few years has been as steady and constant as it has been gratifying. Physicians are beginning to appreciate the need as well as the benefit of organization, and no medical man who is really worth while is willing to throw away educational opportunities which are eventually bound to increase his value to the public.

Fortunately the layman realizes this also, and many unprogressive and self-satisfied brethren who have been content with the "practical" knowledge that they are supposed to have gained since their graduation, find their clientele slipping into the hands of less contented but more energetic practitioners who believe in post-graduate work, medical societies and representative journals.

The formation of the medical library club has not only removed a heavy responsibility from the society, in the matter of supplying a convenient and comfortable temporary home, but has contributed more than any other one factor toward stimulating a taste for scientific medicine in Kansas City. The medical profession here owes Dr. Hertzler a debt the magnitude of which time alone will enable it to realize.

One of the most valuable assets of the society is the *Weekly Bulletin*, and the cordial welcome it receives from the majority of our members indicates that it fills a long-felt want. It seems impossible that less than four short years ago a volunteer committee of confirmed pessimists came near lynching the redoubtable secretary, Dr. E. L. Stewart, when he proposed that we start a journal of our own. The *Bulletin* has now reached a stage, however, where it is not possible for the secretary to attend to all of his official duties without neglecting his private practice, and I believe a literary editor, honorary of course, should be selected to assist him in this work. Much clean, high-grade advertising may be had for the asking, and by judicious management our income from this source can be greatly augmented. The stereopticon has proved itself so nearly invaluable that now we wonder how we ever got along without it. While enjoying its benefits, however, we should bear in mind the fact that the instrument has never been entirely paid for, and I believe this bill should be attended to at the earliest possible moment.

The question of pure milk for both infants and adults is an important and pressing one. The present members of the committee have done

splendid work during the past year, but much yet remains to be done. The incorporation of this commission was a wise and necessary step, and the society and the public are to be congratulated on having the services of so able and unselfish a body of men.

The Committee on Public Health and Legislation also has done yeoman service, and has shown that we can successfully pay more attention to civic conditions than we have been in the habit of doing. Questions of sanitation, and particularly the housing problem, should be of greater interest to physicians than to any other class of citizens, and I feel that the people expect, and have a right to expect, more from our profession in the way of social service of this kind than we are in the habit of giving them.

Despite the fact that we often pose, unconsciously it may be, as the most benevolent profession in the world, we are frequently guilty of sitting idly by and allowing the Board of Public Welfare or the Visiting Nurses Association to correct abuses and institute reforms in matters that should have received our attention months and years before. No one is better fitted for the rôle of Big Brother than the doctor, and opportunities for playing the game are never lacking.

The decent element in our profession is under much greater obligation to one of our newspapers, the *Kansas City Star*, than we have ever taken the trouble to realize or acknowledge. When one appreciates the character of the advertising consciences of the other local dailies (if they may be accused of having consciences), with their reading matter notices of carsonettes, hemorrhoidal serums and lost manhood rot, it appears strange to me that any self-respecting medical man should care to acknowledge their existence, and yet many of us are on their subscription lists, and our money helps to support them!

Collier's Weekly, a periodical that is always at the fore-front, when it comes to a fight for the square deal, recently discussed the splendid victory of the *Chicago Tribune* in its anti-quack crusade. "One of the quarry of the *Tribune's* hunt acknowledged: 'I have paid most of what I made to newspapers that printed my ads.' Despite its source, that statement is indubitably true. Without newspaper advertising no quack can hope to do business. The *Tribune*, in its articles, showed that as soon as the advertising was cut off the venereal sharks ceased to receive patients enough to keep their offices going. Consider, you newspaper reader, the true significance of this. It means that the responsibility for quackery in your town rests with your daily paper. If the newspaper owner did not accept that poisoned and reeking money the quack could not continue to take his profit of human terror

* Read at the meeting of Jackson County Medical Society, Jan. 6, 1914.

and human misery. And the responsibility of the newspaper is readily brought home. No use in attacking the quack except by process of law, and most state laws along this line are wretchedly flimsy. Moral suasion cannot influence the crooked practitioner because he has no character. But a newspaper has a character, and that character is part of its capital. Where the emoluments of evil advertising bring open disgrace on a journal, that journal will drop the advertising. It took the *Tribune* but four days to clean up every newspaper in Chicago.

In Portland the papers were compelled by force of public opinion, voiced through a committee of citizens, to discard this class of business, and now there are no venereal quacks in Portland. The task is possible to any community that can organize public opinion. The method is simple and direct. Compel the newspapers, by force of fear or the persuasions of decency, to cleanse their columns, and quackery will promptly and surely die of inanition."

While we are discussing the subject of journalism a word regarding current medical literature may not be amiss. Did you ever stop to consider the fact that when you allow your name to appear as an "Associate" or "Department" editor on the staff of one of our many privately owned messengers of hope you are standing sponsor for not only the editorial policy of that journal but its advertising standards as well? This holds true with the contributor also, but with him the sin is one of omission rather than commission. Far be it from me to pose as a saint, for in the past I, too, have sinned, as joyously and thoughtlessly as the rest, but now I think the time has come when the proprietors of these worse than worthless periodicals should be made to realize that respected members of the profession have a higher aim in life than that of acting as stool pigeons for the benefit of semi-professional brethren whose sole interest in the science of medicine lies in booming the sale of a large and unsavory mess of thoroughly discredited nostrums.

For those of us who care to write, the avenues of ethical publicity are amply sufficient for all present needs. Give your support to your state and national journals. They are clean, wholesome and honorable, and stand for the best and highest ideals of our beloved profession.

Liquor-selling drug stores are a menace to the professions of pharmacy and medicine, as well as to the health of the public. In dealing with crimes of this kind I feel that there is no middle ground. Licensed saloons are bad enough, Heaven knows, but under our present laws I suppose we must continue to bear with them, for a time at least. Drug store bars, like cocaine depots, are a thousand times worse, and the pro-

prietors of such places deserve no consideration whatever.

An increase in membership is both desirable and essential. At one time I felt that a man who had to be argued into joining his own county medical society was not worth rescuing, but a broader and more benevolent spirit has come with the advancing years, and I now believe that we should endeavor to enroll every regular practitioner of medicine who is honest in his relations with the profession and with the public.

In this selection of new material it is necessary that we always bear in mind the fact that our organization is a scientific and not a social one, and personal antipathies should be allowed to play no part. The by-laws should be so amended that the entire society, in executive session, could act on an application at any time in case the members of the council disagree regarding the eligibility of the applicant. A year's experience with management by council has proved its value, and few of us would care to return to the weary, and oftentimes lonely, midnight vigils that formerly characterized our executive sessions.

The question of fee division we still have with us, and probably will have for some time to come. While all of us acknowledge the practice to be a most contemptible one, lasting reforms come slowly, and puritanical outbursts do more harm than good. In my opinion the recent action taken by the American College of Surgeons will accomplish more toward remedying the evil than any other measure yet devised.

The problem of supplying programs which will be of general interest is a puzzling and difficult one. While it may be necessary to import talent occasionally, I feel that we have an abundance of good material right here at home if we will only take advantage of it. Unfortunately some of our contributions have been a trifle too intricate and technical for general consumption, but I have always felt that the further we got away from the common or garden variety of medical literature the wiser and more philosophic we will become. The man who hunts grasshoppers with a shotgun may be in grievous error, but his chances of success are far better than those of the optimist who goes after wild cats with a bean shooter.

We have been promised a number of interesting and valuable papers for the coming year, and the program committee will do its best to so arrange the material that there will be something of interest for everyone at every meeting. It is very essential that we have more frequent exhibitions of clinical material. Nothing emphasizes a point in differential diagnosis so well as a demonstration on a carefully selected case. The same holds true with regard to some of the newer

laboratory methods. Many procedures which appear theoretical and complicated when judged by the written description, are so simple and practicable that they become matters of almost daily routine after one has seen them demonstrated by an expert.

It will not be the policy of this administration to burden you with innovations or weary you with unattainable reforms. We shall not even attempt to make Kansas City a medical center, but shall try to stimulate scientific endeavor so that our colleagues in other parts of the world will more fully appreciate the fact that really good work is being done in the Middle West.

I am grateful to you for the honor you have bestowed on me, and I fully realize the responsibility that accompanies it. My illustrious predecessor has set a pace that will tax my abilities to the utmost, but I shall do my best to make the coming year a successful one, and I thank you for the splendid spirit of cooperation which is already so strongly manifested.

ADDRESS OF THE RETIRING PRESIDENT *

N. P. Wood, M.D.
INDEPENDENCE, MO.

One year ago when I enjoyed the privilege of addressing you as your presiding officer I ventured the hope that as your president I would have the hearty cooperation of this society in the work of the ensuing year.

The ardent desire of that night, I am glad to declare, has been fully realized.

At the close of the year, for the lively interest in the work and growth of this society, your loyalty to your officers and your universal courtesy to your presiding officer, I want to thank you.

I feel the year's work has not been a failure. The seventy-five scientific papers, sixty case reports and the fifty patients presented on clinic night with their usual liberal discussion, is calculated to bring to all of us much scientific light and clinical thought.

Such programs are destined to stimulate original research and careful assimilation of the scientific facts that are being given to us in such rapid succession.

And clinics bringing before us the usual and the unusual with which we are more or less constantly coming in contact should not only stimulate a keener interest and a livelier enthusiasm, but should inspire us to greater achievement.

We have a pleasing memory of the presence and the gems of thoughts from the gentlemen

who have visited us during the year. Their messages were both interesting and instructive.

An evidence of the progressive spirit of this Society is the creation of the Council, which occurred at the closing of the preceding year; but which begun its work a year ago. This Council transacting the business of the Society gives us the entire evening for the program. The homely maxim "that what is everybody's business is nobody's business" is veritably true in an organization like this. The Council recognizing the fact that it is its specific duty to attend to the business of the Society explains the completeness and dispatch of the Society's business affairs.

This Society has, through its legislative committee, done valuable service in aiding the municipal legislature to eliminate quackery and quacks from this city. We very much regret the sentiment of the citizenship is not such as to demand a better execution of some of your wholesale laws and this one in particular.

The opportunity is open for work in legislation and execution of new and wholesome laws: municipal, state and national. The need is so great along this line that I would suggest a subcommittee on legislation to work, in particular, on municipal legislation in connection with our already existing legislative committee that the latter might give more time to the state work, while the former might work with other organizations that are making wise efforts for the betterment of the physical, mental, social and economic conditions of this city.

It will require a very considerable education and agitation to insure the execution of many of your wholesale laws now existing as well as those you may help get. As long as it is required to furnish sworn evidence sufficient to convict before we can interest the prosecutor's office we may not expect to eliminate these crimes and criminals with the rapidity we all had hoped for.

With an educational campaign that this Society can carry on it is entirely possible to create sufficient sentiment to obtain both wholesome legislation and execution of the resulting laws. But it is always necessary to create a sweeping sentiment among the people (in this democratic form of government) before we may expect or demand conditions that will eliminate these social and economic parasites that are sapping the strength of the people and thus thwarting the highest development and the noblest achievement of our citizenship.

I want to thank all the committees for their efficient and faithful service. The Committee on Program has furnished good programs at every meeting, in variety of material, both scientific and clinical.

* Read before the Jackson County Medical Society, Dec. 16, 1913.

I would not forget to mention the faithful and capable service of the ex-secretary, Dr. W. J. Walker. Because of the enlarged duties of the secretary, it is to be hoped conditions will soon be such that the Society can employ some one person who can give all his time as librarian, editor of the Bulletin and secretary.

The Medical Milk Commission deserves our thanks and hearty cooperation in their efforts to give Kansas City certified milk. They have found numerous difficulties in their way, but have overcome many of them by their intelligent and persistent efforts. But some of the obstacles they have encountered have thus far proved insurmountable. Encouraged by their success they are persevering in the happy assurance that with the backing of this Society they will finally consummate their eternal purpose to give Kansas City pure milk.

Typhoid fever has a greater proportional percentage in the country than in the city. And knowing as we do that many epidemics and endemics in the city come from infected milk, together with the fact that tubercle bacilli, Klebs-Loeffler and other germs find milk a convenient means of transmission, if not a good culture media, emphasize the importance of this milk commission.

These facts should not only interest the profession, but ought to call forth a sincere consideration and an enthusiastic effort of the entire citizenship. Hence I bespeak for this Committee the personal interest of the entire membership of this Society as well as the people of your city.

The successful efforts of this Committee will greatly reduce the morbidity and the mortality of this city and county, among children in particular.

The work of this commission carries with it the plausible suggestion of the county physician working with it; making it his duty to see to it that the various dairies, with their paraphernalia which are out of Kansas City, are entirely sanitary; including the condition of the cows.

However, this county doctor's duties should not be confined to the dairies. He should go over the entire county at frequent intervals, requiring good hygienic environment; including the schools until we get medical inspection for these schools.

Such service is greatly needed in the rural districts of this county. This county doctor would find it necessary to give a good proportion of his time to this work; and his salary should be commensurate with his time and valuable service.

While this Society has discussed many of the evils prevalent, there has been little action looking toward their elimination, such as contract practice, in some of its forms, and drug store prescribing. There are reasons for believing there

are drug stores in this county that are treating various ills—particularly venereal diseases.

Such persons not only violate the law but do a deal of damage to many of these unfortunate persons by sending them away with the false delusion of being cured. Their more or less liberal sale of narcotics and poisons is to be deeply regretted.

Fee-splitting is perhaps the most unfortunate form of graft that ever appealed to the avaricious soul of man, bartering as it does in human health and life in its helplessness.

It is to be hoped at the next general assembly that fee-splitting will be placed on the statutes as a felony, where it belongs.

All of these are lending their might to the commercialization of the profession and offer an insult to its purest ethics and highest dignity.

In this age of reform there are various organizations which are interesting themselves in, and putting forth efforts in obedience to their respective notions for the betterment of the social evils of this country.

Some of the more radical are disposed to apply the most drastic measures for the elimination of these various evils at once; while others are disposed to take a more logical view and endeavor, through prevention, to gradually but surely eliminate these unfortunate conditions.

The solution of these questions of social and moral prophylaxis are being sought through sex hygiene, forced prohibition and eugenics. It is admitted by every thoughtful person that sex hygiene should be taught. In many cities it is being taught in the schools; yet it is a question whether or not it should be taught in the public schools at all. If taught there, should it be taught by the regular teachers or by specially qualified teachers; or should it be taught at home by the parents, who, if not competent may attend a school for their teaching on this as well as other questions of so much importance in the development of the physical, mental and moral make-up of ideal citizenship.

Surely it is wise to teach our young people temperance in its broadest sense—teach them that if they are to attain to their greatest possibilities they must "Be temperate in all things."

This would place a safety valve in the life of every American youth.

While we are rightly striving for scientific supremacy we should realize Jackson County Medical Society is able to do valuable service in the solution of these vexing social problems.

It is a pleasing observation to notice that there is a sentiment in the land to apply eugenics to the human race as it has been applied to the lower animals for these many years, under the law of natural selection and survival of the fittest.

The law of evolution as Darwin (and Wallace) gave it, rests on excessive reproduction and wholesale destruction.

As applied to the human race we should discourage destruction and through natural selection permit only the fittest to reproduce. If no other measures are practical, then by sterilization.

If this promiscuous reproduction of the weaklings mentally, morally and physically is to continue unrestrained, this nation will be destined to national disaster; as other great nations that have arisen in the splendor and strength of their national glory only to fall because of their own degeneracy.

But what has Jackson County Medical Society got to do with sex hygiene and eugenics? The fact that this Society has a more thorough knowledge of these evils in all their ramifications than any other organization, throws on us, as members, a corresponding responsibility in their wise solution. It behooves us, then, as a scientific body to lend our might with other efforts that are being made and will be in the near future for the betterment of the race, for improved health and extended longevity.

Our embryonic home at Thirty-First and Gilham Road, under the shrewd management of Dr. Hugh Miller, is yearly increasing in value until at present it is worth double the cost price, and may be turned to various ways for the financial benefit of this Society.

We should nurture our library by contributing original articles, books and journals. In so doing we would be rendering good service to the development of scientific medicine in Kansas City. When we get in our new home we will have a more spacious library-room, and will then be able to expand the library until it will be commensurate with our greatest needs and highest ideals.

While we have not, as an organized body, realized our loftiest ambitions, we are spreading the influence, and sowing the seed that will result in the rich fruition of our highest ideals.

I congratulate the Society on your wise selection of a presiding officer. You could have found no abler exponent of modern medicine, nor a more brilliant luminary in your ranks.

May we not hope that under his wise administration, together with our hearty cooperation, this Society will make a mighty stride toward the goal of our loftiest ambitions.

Members of the Jackson County Medical Society: for the honor you conferred on me one year ago, and the universal courtesy you have shown me, I again thank you.

N. P. WOOD.

THE ADVANTAGES OF ORGANIZATION IN THE MEDICAL PROFESSION

THOMAS O. KLINGNER, M.D.

SPRINGFIELD, MO.

Recent investigation has revealed the fact that from 20 to 40 per cent. of physicians in the different states have never joined county or state medical societies. This truth naturally leads one to ask the question, Why? In some of the sparsely settled districts, where the individual members would have to travel long distances over rough roads in order to meet in sufficient numbers to conduct a meeting, inconvenience alone to ask the question, Why? In some of the cities and thickly populated country districts, the same excuse does not seem to me a valid one, and in the large cities the question of inconvenience as to time and place is entirely eliminated. Is it then on account of some known or suspected ungentlemanly or unprofessional conduct on the part of so many physicians that they cannot gain admittance? Or is it from sheer indifference to the advancement of the medical profession?

A good medical society is made up of quality rather than quantity in membership, but it is expected that the majority of physicians are sufficiently progressive in their ideas to see the advantages that come to organized bodies of medical men associated for a common purpose—namely, that of advancement.

Medical education has improved in recent years to such a degree that it has raised the intellectual grade of medical men tremendously. The physicians who are most active in society work and medical progress are the leaders in the profession in every community. They are the men whose opinion is most eagerly sought after and whose skill is most earnestly desired. This being true, why do so many medical men remain outside of medical societies?

There are many reasons why every right thinking physician should join a medical society. The man who decides on a medical career and who becomes a graduate in medicine, becomes at once a servant of the people. He has something to give and something to sell. His spare time must be given to reading medical journals and periodicals and to the discussion of clinical cases, and nowhere can the latter be accomplished so well as at the regular meeting of the medical society. (And let me add here by way of parenthesis, that our Greene County Medical Society could profit materially by the presentation and report of more clinical cases. Cases of special interest are seen almost daily by our physicians and surgeons, which could be reported and some of them presented to our society to the benefit of all.) But to go back to my subject. His time is given to

study and research. His skill is his capital or stock and this he expects to sell. If he finds employment he must compete mentally with his brother physicians.

It is one of the business maxims of business men to get together, to compare notes, to share in discussions and to obtain new ideas from their associates and competitors. The same maxim applies with equal force to a body of physicians, but from a different viewpoint. And why should it not apply with even greater force when we remember that the "health of a nation is the wealth of that nation," and on the medical profession more than any other profession or organization do we place the responsibility of sanitation and health? When the health of a city is threatened by contagious or epidemic disease, it is the organized medical profession that is appealed to in order that the disease may be checked and health restored.

Some of the most valuable lessons are learned from the experiences of our brother physicians when related and discussed in the medical society. And the man who stands aloof or who considers himself superior in ideas or attainments to his fellow worker is standing on a shaky foundation, which will some day fail to support him in an emergency. The man who stays away from the medical society and the associations of medical men on the pretense that he is "too busy" is robbing his patients of one of the important things which it is his duty to give—namely, that knowledge and experience gained only by frequent intercourse with his confrères on medical topics, and he is traveling a narrow and selfish road which will some day lead him into disappointment.

In order to render skilful service he must be ever ready to profit by the experiences of others. His work is to preserve both the health and the life of his patients. As civilization advances there are greater demands for expert advice and training. Responsibilities are crowded on the man of knowledge and experience. Not only in the medical profession is this so, but in every other profession and trade. Our state universities, denominational and sectarian colleges find it not an easy task to maintain a faculty of competent instructors, because of the demand for those who have become proficient in their work. Medical men can appreciate this fact when we compare the colleges having a large endowment with those depending on the tuition alone for their support. The same is true in mechanical work. No experienced mechanic need be idle at this day, for the shops and foundries are calling for men of experience—to use a present-day phrase, men who can deliver the goods. The demand is greater than the supply. And I am

optimistic enough to believe there is plenty of room in our own profession for men of experience.

The measure of his value in dollars and cents cannot be estimated by the average onlooker, and no conscientious physician will ever be satisfied until he gives to his fellow-man the best that is possible to himself. To prepare himself for his life work is a long and arduous task and necessitates the expenditure of no insignificant sum of money. He must, at the present time, have attended four years in the high-school or its equivalent, and one, and in some of the states two, years in college before he can even enter on the study of his chosen profession. Then he must attend for four or five years the best medical school within his means, and this should be followed with hospital and post-graduate work. He is then on the threshold of his professional career. His work now is one in which questions of importance, not only to his clientele, but to the community in general in which he lives, will constantly demand his attention. The next few years really determine the man, his capacity and his standing in the community.

He has made a substantial investment and he must look sharply after the interest that is due him. The amount of interest depends on his efficiency, his willingness to work and his continued willingness to learn from his own experiences and the experience of others. If he joins a medical society where he comes in contact with progressive thinkers and workers he is stimulated to keep abreast with his associates. He reads recent medical literature, he hears reports and discussions on obscure and anomalous clinical cases, he has access to libraries and laboratories, and he learns in various ways how to work, how to lessen his anxieties and how to discard the obsolete for the safe and sane methods of treatment.

The man who relies wholly on his own views and his own methods of treatment, who does not or will not receive advice or counsel from other physicians is very apt to fall into ruts, which in a few years he will discover are obsolete.

In no profession has advancement been so great as in the medical, and this advancement is due, to a great extent, to organization and society work. In the society the physician also learns that his fellow-worker has a human side which he has not seen before, and thus he grows in the culture and refinement that are essential to his own advancement. Incidentally he learns the business side of his profession, or he may instruct others or help others in the same way. I am well aware of the fact that a great many physicians who become members of medical societies are not able to prepare and read papers or take an active part in the discussion of medical topics. This.

to a certain extent, is a gift, denied a great many of us. There is no one who realizes this fact more than myself. It is also a gift that can be cultivated, and in no place will a man have a better opportunity to cultivate this gift than at the medical society before an assembly of brother physicians. In the society he finds that his association with other medical men teaches him to read better things. Current medical literature is within easy access, and he is better enabled to write of his experiences and to talk coherently and concisely on medical topics. The code of ethics becomes a broad and helpful aid to him when he sees it applied to a body of men in contact with the wider world. It gives him higher ideals and teaches him tolerance to the faults of lay and medical men.

The outsider may come into the medical society in a scornful attitude of mind, but if he is a real physician he soon appreciates that there are other medical men who have gained wisdom by personal contact with, and a better understanding of, their confrères, and who have discovered that there are those who read intelligently, who investigate medical problems scientifically and who observe with a closer understanding.

The real physician also learns that there are higher ideals in the practice of medicine than the few dollars and cents derived therefrom. To be able rightly to instruct our patrons in the laws of hygiene and sanitation, to be able to prevent rather than cure disease is certainly the highest ideal to which the physician can attain.

Conservatism in medicine has made rapid progress in the last decade. And may I venture the assertion that the day is not far distant when the physician will command and collect as large a fee for advice how to prevent disease as he does to direct the treatment in an already existing disease.

It is largely the work of the organized medical profession that has brought about the sanitary condition of our cities, has limited the spread and lessened the severity of epidemics of contagious and infectious diseases, and has raised the standard of purity of our drugs and food products.

There are many more reasons why a physician should join a medical society, but the chief may be summarized briefly as follows: Broader acquaintanceship, good fellowship, a receptive mind for information gleaned from others, a knowledge of how to read, write and speak intelligently on medical topics, improved business methods that insure a substantial return on early investment and the knowledge that each member of a medical society may be a man among men and a leader and helper in the community in which ones lot is cast. This last clause, of itself,

is sufficient reason to convince any right-thinking physician that it is his duty and should be a pleasure to join forces with his brother physicians and do his part in the advancement of his chosen profession. He should be a lifter in all that pertains to medical progress. The following poem from the pen of Ella Wheeler Wilcox beautifully illustrates, to my mind, the attitude of the medical profession of this day:

There are two kinds of people on earth to-day,
Just two kinds of people, no more I say.

Not the sinner and saint, for, 'tis well understood
That the good are half bad, and the bad are half good.

Not the rich and the poor, for to count a man's wealth
You must first know the state of his conscience and health.

Not the humble and proud, for in life's little span
Who puts on vain airs is counted a man.

Not the happy and sad, for the swift flying years
Bring each man his laughter and each man his tears.

No! the two kinds of people on earth that I mean,
Are the people who lift and the people who lean.

Wherever you go you will find the world's masses
Are always divided in just these two classes.

And oddly enough you will find, too, I ween,
There is only one lifter to twenty who lean.

In which class are you? Are you easing the load
Of over-taxed lifters who toil down the road?

Or are you a leaner, who lets others bear
Your portion of labor and worry and care?

Crank Building.

SCHOOL FOR CRIPPLES

There are two special schools in Birmingham for physically defective children, with accommodation for 200, and 222 children are on the rolls. These children fall into two classes: those who, previously sound have been crippled by the onset of disease which is progressive in its nature, and, unless arrested, will ultimately progress towards permanent disablement and death, and those who suffer from some permanent disablement due either to congenital defect or the result of non-progressive disease acquired in early life. The children are brought to school in ambulances, a mid-day meal, for which in most cases the parents pay, is provided, and they are given such instruction as they are able to receive beneficially. The end and aim of the attempt to educate these children is to render them capable of self-support. Therefore in the one case, every effort is made to arrest the progress of the malady, and in the other to give them the best possible education that their physical disabilities will allow.—*Education.*

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

MARCH, 1914

EDITORIALS

THE PROGRAM FOR THE JOPLIN SESSION

The first day of the annual meeting of the State Association, which will convene in Joplin, May 12, 13 and 14 this year, will be wholly occupied by the sessions of the House of Delegates and the Judicial Council, except that in the evening the address of the president and the orations on medicine and surgery will be delivered as has been the custom in the past. This leaves two full days for the scientific work. All papers will be read in general sessions, the sections having been ordered suspended at the last meeting because of a pretty general conviction that such division of the scientific work was not satisfactory to the majority of the members.

The program committee has made special efforts to obtain contributions from a number of members who have not had opportunity to read papers in recent years. The committee also feels that the program should contain a limited number of papers believing that the experience of the past shows that a full discussion of interesting papers is frequently prevented, that many papers are read hurriedly, hence not instructively, and that authors of other papers are forced to be content with the unsatisfactory legend "read by title"—all because of an attempt to crowd many papers into the limited time allotted to scientific work, a method that everyone will acknowledge is a very unscientific way of doing any work. For these reasons the committee will endeavor to limit the contributions to forty papers, with the expectation that everyone assigned a place will be present, and that the paper may enjoy a thorough and dispassionate discussion.

On another page we publish the names of those who have thus far promised to contribute to the program. These are principally from Kansas City and St. Louis, but the committee desires the rest of the state to be properly represented. Several county societies have requested places reserved for their members and the committee desires to hear from other societies who may wish to have one of their members contribute to the scientific work of the Association.

ETIOLOGY OF POLIOMYELITIS

In the summer of 1912, Dr. E. W. Saunders of St. Louis began his investigations of his theory of poliomyelitis. In February, 1913, a preliminary communication was made to the St. Louis Medical Society in which the position was taken that the disease was not of human origin, although intercommunicable to a greater or lesser degree, but that its source was to be found in the epizootic so common amongst the animals on the farm, and that it was most probably communicated through the fly host. This was merely a theory propounded at the time.

In May a more complete paper was read at the annual meeting of the Missouri State Medical Association and published in *THE JOURNAL* of the Missouri State Medical Association, setting forth this theory fully with the facts obtained by investigation on which the theory was based. In June, the first toxivirulent larvae were obtained and a series of experiments were successfully carried out in the laboratory of the Bethesda Hospital, St. Louis. These experiments were repeated before a special meeting of the St. Louis Medical Society, July 27, and later on August 14, in Buffalo, by Dr. R. O. Meisenbach before the International Congress of School Hygiene. From the summer of 1913 until the present time the work of demonstrating the truth of the green fly larval origin of poliomyelitis has been carried on both in Buffalo and St. Louis. In Buffalo the pathological sections identifying the changes in the cords of the animals experimented on with those of poliomyelitis were thoroughly accomplished and in the Bethesda laboratory serial inoculations of monkeys toxi-infected by the green fly larvae were successfully carried out.

The only possible remaining item of proof is the identification of the organism existing in the specific green fly larvac with the recently established virus of Flexner-Noguchi. Dr. Charles A. Klenk is now working on that problem.

In this issue we publish the latest report of the investigators.

TEACHER IN MEDICINE

When Dr. Clarence M. Jackson, formerly Dean of the Medical Department of the University of Missouri, accepted the position of professor and head of the department of Anatomy of the University of Minnesota last October, Missouri lost a scientist of distinguished ability, an indefatigable worker and a man well beloved by students and practitioners. We take much pleasure in presenting a short tribute to Dr. Jackson, prepared by one who has known him intimately for many years:

"Dr. Clarence Martin Jackson entered the University of Missouri in 1894, where he successively

took the degrees of B.S., M.S., and M.D., and then spent several years studying at the University of Chicago and in Leipsic and Berlin. He has been a teacher in the University of Missouri in various departments since 1897, and held the deanship of the school of medicine from 1909 to 1913.

"Dr. Jackson's most distinguished achievement in medical teaching was the perfection of methods for preparing regional cross-sections of the human cadaver and the introduction of undergraduate medical teaching of 'topographic anatomy' based on these new methods. Dr. Jackson's broad training in comparative anatomy under Prof. (afterward President) Howard Ayers, was directly fruitful, in that he adapted well-known comparative anatomic methods to the study of human anatomy. The first great monograph on topographic anatomy, cross-section method (published in the University Studies, University Missouri, 1905) was produced by Dr. Peter Potter (now of Butte, Mont.) under the direct supervision and inspiration of Dr. Jackson.

"Of no less importance to medical teaching, because of its far-reaching and national importance, has been Dr. Jackson's aggressive and uncompromising work in the Association of American Medical Colleges looking to the saner and more scientific methods of teaching in medical colleges, not only in the so-called scientific subjects, but in the clinical subjects as well. He was among the first to demand that both be treated as scientific, as indeed they are. As a matter of fact, it was this vigorous and sane work of Dr. Jackson that acted as the specific stimulus to give him the refusal of the deanship of the Medical School of the University of Minnesota. Desiring scientific research rather than executive work, Dr. Jackson declined the deanship, but accepted the Professorship of Anatomy and Head of the Anatomical Institute of the University of Minnesota. Aside from the handsome increase in salary, this appointment gives him the resources of an equipment in building and apparatus second to none in America or in Europe. His staff is more than trebled and the financial budget suggests opulence itself, in contrast with that on which he had already built the scientific and educational reputation that placed his name among the starred list in American men of science. It is more than an interesting coincidence that it was similar work of Prof. E. P. Lyon of St. Louis, in the Association of Medical Colleges, that led to his final choice for the Minnesota deanship."

PYO-ATOXIN, A REMINDER OF OLDEN TIMES

During the first years of the American Medical Association's propaganda work a fairly constant supply of asserted chemical substances was fed into the propaganda hopper, and, passing between the mill-stones of the Council on Phar-

macy and Chemistry and the A. M. A. Chemical Laboratory, were reduced to rather ordinary, and often quite simple, mixtures. Thus the Council and Laboratory made known the actual composition of: Phenalgine, Salacatin, Antikamnia, Uron, Thialion, Sulpho-Lythlin, Oxychlorine, Formurol, Anadol, Camphenol, "Lithium-formaldehyde" in Uriseptin, "Somnalgicine" in Pas-Avena. At that time even some highly respectable and competent firms were caught in the possession of products which were said to be, but were not, wonderful new discoveries; but in recent years this class of products has almost become a curiosity and during 1913 the Council and the Laboratory did not secure the scalp of a single member of the tribe "fake synthetic." In this connection a recent report from the A. M. A. Chemical Laboratory (see The Truth About Medicine Department in this issue) on Pyo-atoxin, apparently a weakly specimen of a once flourishing class of preparations, is of interest, because it shows that products of this sort have not disappeared and that only continued watchfulness will keep them in the background.

We urge members to scan the items in the department "The Truth About Medicines" every month. The information contained in these items is important for every practitioner, and very often that mental question mark you have been nursing concerning some recently exploited article will be changed to an exclamation point and your doubts dispelled.

THE ELIGIBILITY OF NON-PROPRIETARY MIXTURES

Physicians and publishers of journals who wish to adhere to the recommendations of the Council on Pharmacy and Chemistry are herewith reminded that non-proprietary mixtures are deemed by the Council as eligible for prescribing and advertising, without the necessity of being admitted to New and Nonofficial Remedies.

Strictly non-proprietary mixtures of official substances, etc., (for instance, morphin and atropin tablets) are generally sold without any special claims which would make them subject to investigation by the Council; while the number of these combinations listed by the various manufacturers is so great that even their mere enumeration in New and Nonofficial Remedies would be practically impossible. The intelligent physician is the best judge of the advisability of prescribing ready-made non-proprietary mixtures of this type. The danger is that he may not always be able to discriminate clearly, on the one hand, between these non-proprietary mixtures that are not listed in New and Nonofficial Remedies because their admission would be superfluous, and on the other hand, the proprietary mixtures which do not appear in New and Nonofficial

Remedies because they have been refused admission. The appended definition of "proprietary mixtures" shows where the line is drawn by the Council.

PROPRIETARY MIXTURES.—A mixture will be considered as proprietary, and therefore requiring consideration by the Council and admission to the book or appendix, if it contains any proprietary article, if it is marketed under a name which is in any way protected, or if its manufacturer claims for it any unusual therapeutic qualities.

All mixtures to which this definition applies are deemed proprietary and will be listed by name in New and Nonofficial Remedies, if they comply with the rules of the Council.

In all doubtful cases, the secretary of the Council will gladly supply specific information.

REPORT OF COMMITTEE ON PUBLIC HEALTH AND LEGISLATION OF MISSOURI TO THE CONFER- ENCE AT CHICAGO, FEB- RUARY 23, 1914

This being a non-legislative year, there is nothing to report concerning legislation. Activities have been directed toward public lecture work.

During 1913 there were fourteen public lectures on various topics. In all these the county medical society was made sponsor for the meetings under the direction of the state medical association.

Dr. Harriet H. Stevens represents the Woman's Committee of the A. M. A. on our committee, and has taken charge of the public health lectures. We have cooperated with the Committee on Conservation of Vision, and lectures on this subject will be given in the counties.

The lectures at the State Fair were not successful in 1913 because of lack of space in the buildings. We appeared before the State Board of Agriculture and presented our plans for the erection of a Sociologic Building which would be devoted wholly to public health work during the annual State Fair. The Board promised to ask the legislature for the necessary funds. It is proposed to have the buildings represent model high school buildings, so that counties desiring to erect such structures will have a permanent model at the state fair grounds.

A. R. McCOMAS, Chairman.

PROPOSED AMENDMENT TO THE CONSTITUTION

In accordance with the requirements of our constitution and by-laws we publish the following amendment to the constitution suggested by the committee on constitution and by-laws and intro-

duced for first reading at the annual meeting in St. Louis in May, 1913:

Amend Article 8, Section 1 of the constitution to read as follows: The officers of this Association shall be a president, five vice-presidents, a secretary, a treasurer and twenty-nine councilors, more or less, as shall be determined by the House of Delegates from time to time.

Amend Article 8, Section 3, to read as follows: The president, vice-president, councilors and orators shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of councilor, and no person shall be elected to any office who is not in attendance at the annual session and who has not been a member of the Association for the past two years.

Annul Section 4 of Article 8.

OBITUARY

THOMAS W. NIXON, M.D.

Dr. Thomas W. Nixon, dean of the medical profession of Callaway County, died at his home in Ham's Prairie, February 24, aged 85. He was a graduate of the University of Pennsylvania Medical Department, 1858, and was an active practitioner for over fifty years. He was one of the Missourians who crossed the plains with the gold hunters in 1849.

WILLIAM WALLACE STEVENS, M.D.

Dr. William Wallace Stevens of Kansas City was killed in an automobile accident, while driving to Independence, February 21. His sudden death is a great loss to the profession of Kansas City and to the state, as he was held in high esteem by all who knew him. He was a member of Jackson County Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association. He was only 34 years old. He received his medical education in the University Medical College of Kansas City, from which he graduated in 1901.

NEWS NOTES

THE State Board of Health will meet in St. Louis March 16, for the trial of several physicians who have been charged with misconduct.

LIVINGSTON COUNTY MEDICAL SOCIETY recently adopted resolutions condemning the appearance of the names of their members in the newspapers. A full report is published in their society proceedings in this issue.

DR. L. S. LUTON and DR. HARRIET H. STEVENS of St. Louis, accompanied by Dr. Stevens' mother, have sailed for Naples, from which point they will go to Vienna and take postgraduate work in the University of Vienna.

THE health board of Kansas City will endeavor to organize the schoolchildren as fly swatters in the fly crusade this spring. The children will be divided into sanitary squads and money prizes will be offered to those who make the best records.

DR. SHERWOOD MOORE of St. Louis has accepted a commission to make certain investigations along the west coast of Africa in the Belgian Congo, giving special attention to tropical diseases. He will be away for an indefinite period.

MEMBERS who are alumni of Rush Medical College are requested to notify Dr. W. H. Lanyon, 2019 Sargeant Avenue, Joplin, Mo., whether they will attend the annual meeting of the State Association and participate in the dinner of Rush Medical College Alumni.

THE State Public Service Commission has issued an order requiring the Sedalia Water Company to install a modern filtration plant and to draw more water from deep wells. The principal supply of water for Sedalia is taken, it is said, from a small creek, and in warm weather the water is easily contaminated.

THE Visiting Nurses' Association of St. Louis visited 26,052 sick persons during 1913. In addition to caring for the sick, the nurses instruct families to observe the rules of sanitation. The Visiting Nurses' Association at Springfield made 1,833 visits during 1913. Their work is similar to that of other visiting nurses' associations.

THE general assembly at St. Louis has passed the milk bill prepared by the board of health. This bill is one of the most comprehensive yet placed on the statute books of any city, and will insure pure milk to the citizens of St. Louis. It becomes a law immediately on being signed by the mayor, which the latter has promised to do. It will probably require an increase in sanitary inspectors, which also will be allowed by the assembly. It was vigorously pushed by the St. Louis *Republic* and numerous civic organizations.

KANSAS CITY has no ordinance prohibiting spitting on the sidewalks. The health commissioner says he will attempt to have a bill passed

to prevent this nuisance. There is an ordinance against spitting in the street cars, which, it is declared, is not observed. A few arrests for breaking that law would have a salutary effect.

THE postoffice buildings in St. Louis will undergo a strict sanitary survey at the request of the postmaster, Mr. Colin M. Selph. The public health service has instructed Dr. M. J. White, surgeon in charge at St. Louis, to direct this investigation. It is probable that the work will be extended to include medical inspection of employees at stated intervals.

HILEN K. WALLACE, a son of Dr. C. H. Wallace of St. Joseph, has been successful in the competitive examination for interns at the German Hospital, Philadelphia. He made the highest grade and therefore had the choice of the four openings. He chose the surgical service under Dr. John B. Deaver. He has studied medicine in the University of Pennsylvania, from which he will graduate in June.

THE St. Louis grocer who is giving with every purchase good advice to his customers on food values has evolved a premium package worth all the trading stamps ever printed. This man, it is said, strives to educate his patrons in the comparative nutritive values of foodstuffs, and induce them to use judgment in varying their purchases between high-priced and low-priced goods, according to their food unit value.

A BOND issue of \$250,000 will probably be approved by the authorities to provide buildings to care for the tuberculous patients at Koch Hospital, St. Louis, the municipal institution used exclusively for the care of tuberculous patients. At present the city is erecting small frame houses to provide shelter for forty patients that have been cared for at the City Hospital during the winter because of the crowded condition of Koch Hospital.

THE Medical Section of the American Life Convention held its fourth mid-year meeting at French Lick, Ind., March 4, 5, 6, 1914. The program contained 18 papers bearing on the subjects of special interest to life insurance examiners. Among the papers was read one by Dr. Amand Ravold of St. Louis, on "Syphilis from an Insurance Standpoint. Other speakers were: Col. W. C. Rucker, Asst. Surgeon General United States Public Health Service, "Preservation of Health"; Dr. Wm. J. Mayo, "Prognosis Following Operation for Surgical Diseases of the Abdomen"; Dr. J. N. Hurty, secretary Indiana State Board of Health, "Public Health Administration."

MT. ST. ROSE HOSPITAL of St. Louis has begun a campaign to raise \$300,000 by popular subscription. This institution is the only private hospital in St. Louis that receives tuberculosis cases exclusively and has more demands on it than can be met. The campaign is in charge of numerous committees of prominent men and women and has the indorsement of the St. Louis Medical Society, the Central Agency of Charities and other civic bodies.

MR. EMILE N. TOLKACZ, chairman of the Hospital Board of St. Louis, declares that the people are being cured of the "dispensary habit." The report of the hospital commissioner shows that the number of persons applying for treatment at the four city dispensaries in February was 1,200 less than in the same month last year. The board has recently inaugurated a system of investigation of the ability of persons applying for free treatment to pay for medical services and refusing to serve those who have means.

A LARGE delegation of men and women interested in the work of Mt. St. Rose Hospital at St. Louis has begun an active campaign to raise \$300,000 for that institution. The hospital limits its work to the care of tuberculous patients, and is in great need of a large sum of money to enable it to meet the present demands and increase its facilities. It is said that more than 60 per cent. of the patients are non-paying, and the profits from the paying patients are devoted entirely to defraying the expenses of the institution.

THE State University has issued a pamphlet on "Resuscitation." This brochure is much more than a mere description of the methods of resuscitating apparently lifeless persons. The author, Dr. D. H. Dolley, Prof. Pathology and Bacteriology in the State University, has investigated the subject in the most scientific manner that we have yet observed. Following experiments upon animals, he discusses the subject in a most instructive and intelligent manner. The pamphlet will be sent to any member desiring a copy. Address the Preventive Medicine, State University, Columbia.

THE Kansas City Advertising Club voted unanimously to urge the passage of an ordinance in both Kansas Cities (Missouri and Kansas) to prohibit deceptive advertising. The members of the club were urged to get into the fight for decency and honesty in all classes of advertising as a business proposition. One of the speakers said so many fake advertisements are printed that the returns from legitimate advertising suffer because of the general condemnation of all advertising after a person has been deceived. A committee of ten was appointed to work for the passage of the ordinance on both sides of the

river. The bill is similar to a bill that was introduced recently in the general assembly of St. Louis.

MR. EMILE N. TOLKACZ, Chairman of the Hospital Board at St. Louis, declares that the people of St. Louis are being broken of the "dispensary habit." The report of the hospital commissioner in February, 1914, shows a decrease of 1,200 in the number of applicants for treatment at the city dispensaries less than in February, 1913. The hospital board has inaugurated a system of investigating applicants for free treatment, and when it is found they can pay for medical services they are refused treatment at the city's expense. This is one of the most effective methods yet devised for protecting the city against imposition by a class of persons who do not deserve free medical services, and the board undoubtedly will have the support of the entire medical profession of the city in this commendable work.

PLANS for two of the buildings of the group to be erected for the Infectious Disease Hospital at St. Louis have been accepted and construction will begin about May 1. It is expected these two buildings will be completed in the early winter. The two buildings will cost about \$248,000. The group will include eight buildings at a total cost of \$700,000. It is said that the construction of these buildings, which are sorely needed in St. Louis, might have been begun a year ago had not the architect precipitated a wrangle with the board of public improvements over the amount of his commission, which he said ought to be 6 per cent. of the total amount to be expended. The board compelled the architect to accept 5 per cent. commission, thus saving the city \$7,000. In the meantime, those sick with infectious diseases have been housed in the abandoned female hospital building.

FIVE of the quack doctors exposed in the recent crusade of the *New St. Louis Star* have been arrested by United States authorities charged with misuse of the mails. Among these are Drs. William Pierce, A. C. Moorehead and James Moorehead, alleged to have been advertising as "Meyers and Company." Another is Dr. A. J. Miller, known as a cancer specialist, and another is Dr. H. Chas. Lloyd. The offices of the Dr. King Medical Association Company have closed. Dr. Ira Allison has been ousted from his quarters in the Holland Building, and it is said he will leave St. Louis for Council Bluffs, Iowa. Dr. Nathan A. Hughes jumped his bond of \$1,000 and departed for parts unknown. His offices are closed. Dr. F. H. Wichmann was fined \$100 and costs, the fine being stayed on his promise of leaving the state. This man is a paroled convict from Nevada.

THE Therapeutic Section of the American Physical Education Association, which will hold its annual convention in St. Louis, April 1, 2, 3 and 4, promises to be one of the most interesting divisions of the convention. The general public will be shown how the educators conserve the health of the schoolchild. The therapeutic section will meet in the auditorium of the St. Louis Medical Society. The following will have charge of the arrangements: Drs. Marsh Pitzman, A. S. Barnes, L. S. Luton, F. W. Abeken and George Koenig. The St. Louis public schools have the best equipped gymnasiums in the United States. A part of the entertainment for delegates and visitors will be a tour of inspection through the medical schools, clinics and hospitals. Baroness Rose Posse, president of the Posse Normal School of Gymnastics, Boston, Mass., will be one of the speakers before the women's section, which will meet in the auditorium of the Young Women's Christian Association building. Demonstrations of elementary-school work and high-school work will be given by thousands of pupils.

SINCE publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R.":

Amphotropin (Farbwerke Hoechst Co.).

Trypsin (Fairchild Bros. & Foster).

Phenolsulphonephthalein, H. W. & Co.; Phenolsulphonephthalein Ampoules, H. W. & Co. (Hynson, Westcott & Co.).

Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Disinfectant Krelas, Mulford; Salicylos; Staphylo-Serobacterin; Strepto-Serobacterin; Typho-Serobacterin (H. K. Mulford Co.).

Essence of Pepsin, Fairchild: The Council had agreed to the request of Fairchild Bros. & Foster that the product "Essence of Pepsin, Fairchild" be described in N. N. R. under the new name "Pepsencia," but later reconsidered this action. The product is included in N. N. R., 1914, on page 110, under its old title "Essence of Pepsin, Fairchild."

MEMBERSHIP CHANGES IN FEBRUARY

NEW MEMBERS

Burton, Philip Patrick, Lowndes.
Diemer, F. E., Bunker.
Dolley, David H., Columbia.
Evans, Edward E., Mercer.
Forest, G. B., Bunker.
Grant, Harrison M., Pleasant Hill.
Graves, John B., Farmington.
Hammer, John Elmer, Mercer.
Haney, Thomas Lee, Flat River.
Mayfield, Amon A., Sikeston.
McColl, Nettie, Hannibal.
Meador, Harvey L., Garwood.
Murphy, Walter W., 414 Argyle Building, Kansas City.
Oyler, Harry W., Mill Grove.

Peck, Joseph H., Chillicothe.
Philips, Benj. L., Drexel.
Poehl, Wm. G., 5114 Von Versen Ave., St. Louis.
Richardson, J. S., Olean.
Riley, Fred P., Brashear.
Rutherford, Walter S., Sullivan.
Stewart, Louise F., Gower.
Stokes, Chauncey M., Canalou.
Threadgill, J. M., 6236 Olive St., St. Louis.
Weintraub, S. A., Century Bldg., St. Louis.
Wilbut, Herbert L., Granby.
Wood, G. W., Iconium.

CHANGES OF ADDRESS

Alderman, M. C., Sedalia to 805 McGee St., Kansas City.
Barton, Wm. E., Woodriver, Ill. to Ellington, Mo.
Blackburn, Porter D., St. Louis to 208 Beatty Building, Houston, Texas.
Butler, Thos. R., Marshall to Lexington, Mo.
Crider, A. J., Freeburg to Brinkton, Mo.
Harwood, W. S., Rensselaer to Monroe City, Mo.
Henske, J. A., Mo. Pacific Hospital, St. Louis to 1504 N. Seventeenth St., Omaha, Neb.
Keber, John B., Boulder, Colo. to First Ave. Hotel, Denver, Colo.
Lowe, Orrin C., St. Louis to Mo. Pacific Hospital, Kansas City.
Mayfield, C. Boyd, Edinburg to Gilman City.
McCoy, J. H., St. Joseph, Mo. to Beattie, Kans.
Moore, C. A., Ash Grove to Aurora, Mo.
Osborne, Charles, Florence to Syracuse, Mo.
Printy, L. E., Flat River to 3901 Park Ave., St. Louis.

NO LONGER MEMBERS

Bedal, Adelheid, 3447 Lafayette Ave., St. Louis.
Dyer, R. H., Sheridan.
Eastman, F. E., Cameron.
Emmons, F. H., Auxvasse.
Furney, E. E., 3417 Morgan St., St. Louis.
McDonald, E. S., Cameron.
Olgivie, Roy K., Blodgett.
Robertson, A. W., Lathrop.
Schmidt, Wm. C., 2417 Broadway, St. Louis.

REINSTATED

Fitzpatrick, Charles M., Lesterville.
Kuper, George H., 5222 N. Twentieth St., St. Louis.

DEATHS

Moore, Orbun T., St. Louis.
Stevens, Wm. W., Kansas City.

CORRESPONDENCE

SERO OR ANIMAL THERAPY

To the Editor:—Eliminating the commercial feature, do you think the sero or animal therapy will become the accepted method of treatment, and will the people submit to the needle as they at present do to the knife and hospital.

A MEMBER.

This inquiry in regard to the popular acceptance of "serum and injection treatment for disease" is too general to answer satisfactorily. But the experiments and results of competent laboratory investigators, with the reports by numerous physicians upon cases treated by such methods justifies a conservative opinion as to the future of such therapy.

In the first place both the work and the application of the findings of the research man and experimenter to-day have more to do with prophylaxis than with the cure of disease, and, in all probability, within twenty-five years the curative problems of tuberculosis, syphilis, malaria, rheumatism, typhoid fever and even many of the acute contagious diseases will be just as rare, for the general practitioner, as are those problems pertaining to cholera, yellow fever and plague at present. This very fact of the rapid elimination of disease, just as soon as society is ready to inaugurate and to establish the means of known sanitary and hygienic methods of prevention, is going to make unnecessary the subjecting of mankind to serum or injection treatment. In the field of surgery this same opinion has been expressed by Dr. J. B. Murphy of Chicago.

As to the results of serum and vaccine treatment of disease, it can be said that more has been learned along lines of physiology and physio-chemical reaction of body tissues to the specific therapy than has resulted in cure and control of disease. Typhoid is not cured by vaccines, but it is prevented by such therapy. We now know from the careful work of Rosenow of Chicago, the cause of rheumatism, namely, the "diplococcus of rheumatism." But it is Rosenow's opinion that we have not thereby a knowledge of a cure, or that we are likely to devise a specific for it. With the known etiologic, bacterial factor, we have however a means of preventing the contributory causes leading up to the articular and cardiac involvement.

We have to-day very few sera, antitoxins or vaccines which are proving specifically curative. The antitoxin to diphtheria is one. The Flexner serum for epidemic cerebrospinal meningitis, especially when used early, is another. The antitetanic serum, typhoid vaccines and a few other bacterial products are only prophylactic in their action. The numerous vaccines, sera and filtrates for streptococci, staphylococci, bacilli, etc., on the market have a large sale due to the advertising methods resorted to by the manufacturers, not to the cures effected.

All these facts must be weighed in considering the question of an "accepted method of treatment." The investigations of the Council of Pharmacy and Chemistry of the American Medical Association and the reports of careful observations by reputable hospitals offer quite a contrast to the cures reported to manufacturers from isolated and questionably scientific sources. Notwithstanding that typhoid fever, pneumonia, pertussis, gonorrhea and even pulmonary tuberculosis are being reported as being cured by their respective vaccine or serums we have not the conclusive evidence to-day that such is a fact.

If however, it can be demonstrated to the suffering public that such specifics, for infections in general, can be produced, as at present we possess in the antitoxin for diphtheria, in quinin for malaria, in thyroid extract for myxedema and in mercury for syphilis, then is it probable that they will submit to any means of administration, whether by the hypodermic, the intramuscular, the intravenous or the spinal route. —En.

MISCELLANY

TWELFTH INTERNATIONAL CONGRESS OF OPHTHALMOLOGY

The Twelfth International Congress of Ophthalmology will convene at St. Petersburg, July 27 to August 1, under the patronage of the Czar. The honorary president is Prof. Arnaldo Angelucci, Naples.

The order of the days, with some indispensable changes, will be arranged as follows:

Monday, July 27, at 10 o'clock—Inauguration ceremony of the Congress. Nomination of the definitive bureau of presidency according to Section 7 of the Congress' rules. Further scientific session, with discussion of the official subjects. The session will finish not later than 2 o'clock p. m. At 9 o'clock in the evening reception at the City Hall by the city councilors.

Tuesday, July 28, from 10—Scientific session at 1 o'clock. In the afternoon from 4 to 9 excursion to Peterhof to see the palaces, the park and the fountains.

Wednesday, July 29, from 10—Scientific session at 1 o'clock. In the evening garden party offered to the members of the Congress by the Central Bureau.

Thursday, July 30, from 10—Scientific session at 1 o'clock. In the evening at 7 o'clock official banquet by subscription.

Friday, July 31, from 10—Scientific session of demonstration in the large auditory of the Natural History Institution (Nischegorodskaja 2). At 8 o'clock in the evening performance at the Emperor Nicolas II National Theater.

Saturday, August 1, at 11 o'clock, final session. Discussion of various questions and propositions and choice of the place for the next Thirteenth International Congress of Ophthalmology. Farewell speeches. In the afternoon excursions to the environs of the capital.

Further information desired by physicians intending to attend the Congress will be supplied by Dr. W. H. Luedde, member of the Corresponding Committee for the United States, Metropolitan Building, St. Louis.

THE KANSAS CITY DRUG CLUB

We wish to congratulate the association of retail druggists upon their reorganization and their immediate specific action against the sale of liquor in drug stores. It is another illustration of the recognition among professional and commercial bodies of their responsibility in maintaining correct and ethical practices among their own members. It is hoped that this may be only the beginning of a decided change and improvement in the drug store situation.

To the medical profession, for whose dispensing needs the drug store or pharmacy was originally established, there has arisen of late a question as to whether it would not be necessary to limit their prescribing to a very few of the present high grade drug stores, or favor the establishing of district pharmacies which might dispense only drugs and chemicals.

Scattered throughout this city are numerous corner stores whose windows advertise Coca Cola.

cigars and candy, whose interiors displays prominently soda fountains, shelves of patent medicines, cases of stationery, an old and limited supply of drugs and a screen or cellar with suggestive evidence of a retail liquor trade. An undergraduate clerk is frequently in sole charge, and little evidence present of a dispensary pharmacy. In sending prescriptions to these drug stores the physician is not assured that the ingredients prescribed will be dispensed or that accuracy will result in the compounding. Hence in commending this recent action of the Kansas City Drug Club against the sale of intoxicating liquors in retail drug stores, it is also urged upon them that they advocate the establishing of fewer and higher grade pharmacies in this city.

In fact, if the need of a drug store in a particular location and the competency of the druggist were the principal conditions upon which drug stores were located, there would be little trouble over the practices of the druggist or question of his legitimate success.

In urging the raising of the general standard of drug store management and practice it is realized that cooperation must exist between the two organizations of medicine and pharmacy. Such it is believed is growing. The Jackson County Medical Society will gladly support any further action of the Kansas City Drug Club looking toward improved and legitimate drug trade.—
Bulletin Jackson County Medical Society.

MEDICINE AND SURGERY AT THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION

One fact alone would make the exhibit in medicine and surgery at the Panama-Pacific International Exposition the most important of any similar display at any preceding exposition, for when the world comes to San Francisco in 1915 to celebrate the completion of the Panama Canal, it will be divided in admiration of the two men who perhaps above all others are responsible, under the United States Government, for the successful termination of the gigantic work. And these two men are representatives of highest honor from the science of engineering and the science of medicine: Dr. William C. Gorgas, Colonel in the United States Army Medical Corps, is the physician who undertook to preserve the lives of the canal builders in a land of malignant disease, while the toilers were operating under the guiding genius of the great Colonel George W. Goethals of the Corps of Engineers, United States Army.

Representatives of the science of medicine and surgery from every land under the sun will be present during the exposition, to pay tribute to the doctor and incidentally to study the processes

whereby the ravages of a disease-ridden zone were stayed and the camp of the canal builders became the abode of health.

The element that alone would lend a distinctive character to the exhibit is, the featured presentation of the methods whereby the deadly mosquito was fought in his native haunts of morass and jungle; the application of specially devised sanitary processes by which Dr. Gorgas and his men were victors in their struggle with deadly fevers.

This Emergency Hospital will be a model equipped by the leading manufacturers of the country, with the best instruments and appliances and stocked with every drug that physicians know.

Dr. R. N. Woodward, at present in charge of the United States Marine Hospital, situated near the Golden Gate, has been appointed by the Treasury Department to assume control of the Emergency Hospital at the exposition, and he has taken great pride in assembling all of the elements, materials and equipment necessary for a model institution.

MEDICAL SCHOOL INSPECTION, ENGLAND

Medical school inspection in England is developing auxiliary services on an extensive scale. The medical inspector for the Birmingham Education Committee in a recent report, calls special attention to the fact that a large proportion of the defects discovered in this inspection are due to removable causes, antecedent to school life. Therefore, any scheme for dealing with the physical disabilities must include those agencies which attempt to deal with the child from its birth. Mention is made in this connection of the valuable aid afforded by the Notification of Births Act which enables health inspectors to visit the homes of newly born infants. In 1910, for instance, 14,898 births were registered and 11,648 visits were paid by health visitors. Then leaflets on the proper care and feeding of infants are distributed by the midwives in the city.

In addition to the work a scheme was started in 1908 in one of the poorest districts of Birmingham, with a population of about 41,000, under which a lady doctor, assisted by two health visitors, visits at frequent intervals all new born children during their first year. In this district there were 1,638 births and 12,542 visits were paid in 1910, while 613 mothers made 2,986 attendances at infant consultations. In addition a lady has supplied one substantial meal daily to poor women nearing confinement, or nursing mothers who are obviously in a starving condition. Similar schemes are carried out in other poor districts in Birmingham and in two of the areas where pov-

erty is found in its most grinding form are two associations that care for about 100 children up to the age of five or six.

The report states that to the lack of coordination between the charitable organizations dealing with the care of children, must be added parental indifference which springs from lack of intelligence and self-respect. It urges that this is the chief point against which all efforts must be directed. Too frequently the means of amelioration employed have been directed rather to the immediate relief of the individual than to the fundamental factors which are the determining causes of the need for assistance. The family rather than the individual must be regarded as the unit. It is argued that the formation of a series of School Care Committees, including all elementary schools, would go far to supply the initial coordination which is necessary, and would allow the problem to be attacked from the view point of the home and help to remove much of the indifference and ignorance with which the medical service is regarded.—*Education*.

AMERICAN COLLEGE OF SURGEONS

THE FIRST CONVOCATION

The first convocation of the American College of Surgeons occurred in the Gold Room of the Congress Hotel, Chicago, on the evening of Nov. 13, 1913.

The prospective Fellows were invited to sign the roll of membership at this place during the day. Each page of the roll was headed by a pledge or contract, and to this the Fellow appended his signature and address.

FELLOWSHIP PLEDGE

Recognizing that the American College of Surgeons seeks to develop, exemplify and enforce the highest traditions of our calling, I hereby pledge myself, as a condition of fellowship in the College, to live in strict accordance with all of its principles, declarations and regulations. In particular, I pledge myself to pursue the practice of surgery with thorough self-restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by the study of surgical literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interests of my professional brothers and seek their counsel when in doubt of my own judgment; to render willing help to my colleagues and to give freely my services to the needy. Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness; to shun unwarranted publicity, dishonest money-seeking and commercialism as disgraceful to our profession; to refuse utterly all secret money

trades with consultants and practitioners; to teach the patient his financial duty to the physician and to urge the practitioner to obtain his reward from the patient openly; to make my fees commensurate with the service rendered and with the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation. Finally, I pledge myself to cooperate in advancing and extending, by every lawful means within my power, the influence of the American College of Surgeons.

PERMANENT HOME OF THE COLLEGE

At the meeting of the Board of Regents held Nov. 13, 1913, Franklin H. Martin asked the privilege of discussing the selection of a permanent home for the American College of Surgeons. Dr. Martin said: "It is the judgment of your secretary that the permanent home of the American College of Surgeons should be located in a city other than Chicago. Chicago is already the home of one of the strongest medical organizations in the country, and on the grounds of equity alone, another city should have the honor of housing this new and powerful organization—the American College of Surgeons. I therefore move that a committee of five be appointed by the president which should have for its object the selection of a permanent home for the American College of Surgeons. I would include in the motion that this permanent home be ready, if possible, for occupancy at the annual meeting in November, 1914, at the end of our first fiscal year." The motion was seconded by Dr. John B. Murphy.

After considerable discussion, Dr. J. M. T. Finney made a statement in which he said Dr. Martin had presented his views on the subject to him in a personal interview, and that he, Dr. Finney, was convinced in the face of all the facts that it would be advisable in his opinion to adopt Dr. Martin's resolution. The motion was then passed, all members of the Board of Regents present voting in the affirmative.

The president appointed the following committee on a permanent home for the American College of Surgeons: C. F. Stokes, chairman; F. J. Cotton, H. A. Bruce, G. W. Crile, G. E. Brewer, H. M. Sherman.

The next convocation for the admission of Fellows will be held in one of the eastern cities on Monday evening of the week of the meeting of the American Medical Association. The third convocation and the annual meeting will convene in November, 1914, the date and place to be determined by the Board of Regents.

The following Missouri physicians are fellows of the college:

Nathaniel Allison, St. Louis; F. W. Bailey, St. Louis; Willard Bartlett, St. Louis; J. F. Binnie, Kansas City; Vilray P. Blair, St. Louis; John Young Brown, St. Louis; George W. Cale, Jr.,

St. Louis; N. B. Carson, St. Louis; J. W. Charles, St. Louis; Malvern B. Clopton, St. Louis; W. T. Coughlin, St. Louis; Harry Sturgeon Crossen, St. Louis; Walter B. Dorsett, St. Louis; Osear H. Elbrecht, St. Louis; W. J. Friek, Kansas City; Eugene C. Gehrung, St. Louis; Jacob Geiger, St. Joseph; Frank A. Glasgow, St. Louis; J. D. Griffith, Kansas City; J. G. Hayden, Kansas City; A. E. Hertzler, Kansas City; Howard Hill, Kansas City; Roland Hill, St. Louis; Jabez N. Jackson, Kansas City; Ernst Jonas, St. Louis; Walter C. G. Kirehner, St. Louis; Bransford Lewis, St. Louis; Hanau W. Loeb, St. Louis; James E. Logan, Kansas City; Frank J. Lutz, St. Louis; F. M. McCallum, Kansas City; Harvey G. Mudd, St. Louis; Fred T. Murphy, St. Louis; Clarence M. Nicholson, St. Louis; Frank G. Nifong, Columbia; Archer O'Reilly, St. Louis; John M. Perkins, Kansas City; Francis Reder, St. Louis; Ernest F. Robinson, Kansas City; W. E. Sauer, St. Louis; M. G. Seelig, St. Louis; William A. Shoemaker, St. Louis; Selden Spencer, St. Louis; Jackson B. Taulbee, Joplin; Frederiek J. Taussig, St. Louis; John H. Thompson, Kansas City; Herman Tuholske, St. Louis; Paul Y. Tupper, St. Louis.

SOCIETY PROCEEDINGS

MISSOURI STATE MEDICAL ASSOCIATION

Fifty-Seventh Annual Session, Joplin, May 12-14, 1914

PRELIMINARY ANNOUNCEMENT OF PROGRAM

The sessions of the House of Delegates and of the Judicial Council will be held on the first day, Tuesday, May 12, and at night the president's address and the orations on medicine and surgery will be heard. The sessions for scientific work will convene on Wednesday and Thursday, May 13 and 14. The following will contribute papers: From St. Louis, Drs. Rudolph Buhman, Given Campbell, George Dock, Walter Fischel, R. Emmett Kane, R. H. McBaine, R. Walter Mills, Fred T. Murphy, C. H. Neilson, Archer O'Reilly, Fred Pfahlen, G. Canby Robinson, Sidney I. Schwab, R. L. Thompson, P. Y. Tupper; from Kansas City, Drs. P. T. Bohan, W. W. Duke, C. B. Francisco, G. H. Hoxie, F. E. Murphy, R. M. Schaufler, E. H. Schorer, J. G. Sheldon, W. A. Shelton, Fred T. Van Eman, I. J. Wolf; from other parts of the state, Dr. T. Guy Hetherlin of Louisiana; G. W. Hawkins, Salisbury; A. Jackson McNeese, Clinton.

The program committee is in communication with other members outside of the large cities and in the next announcement will probably have the complete program ready.

ROLLA DISTRICT MEDICAL SOCIETY

The Rolla District Medical Society held its seventy-seventh semi-annual session at Rolla, December 18. The program for the afternoon included the following:

"Neglected Adenoids," by Dr. C. F. Briegleb, St. Clair. Reports of cases, by Dr. J. P. Dunnigan, Sullivan; Dr. W. H. Breuer, St. James; Dr. J. C. Welch, Salem; Dr. R. E. Breuer, Newburg.

In the evening the president, Dr. R. H. Finley, delivered a splendid address in which he encouraged the members to continue in their efforts to promote the standard of practice and use every means of increasing their knowledge of the science and art of medicine and their usefulness to the people.

Dr. F. J. Lutz of St. Louis read an interesting paper on the use of sugar in the care of cancer cases, especially for the prevention of the offensive odors.

Dr. E. J. Goodwin of St. Louis, secretary of the State Medical Association, gave a talk on the benefits of organization and the advantages of membership in the county, state and national societies.

Officers elected are: President, Dr. R. E. Breuer of Newburg; secretary-treasurer, Dr. W. H. Breuer, St. James (re-elected).

ST. LOUIS MEDICAL SOCIETY

Meeting of January 31

The meeting was called to order at 8:50 p. m. by the president, Dr. A. F. Koetter.

The president declared a recess of ten minutes to examine the pathological specimens presented by the coroner's physicians.

Dr. Lewis R. Padberg read a paper entitled, "The Relation of the Physician to the Coroner's Office."

During the discussion which followed, Dr. Hochdoerfer presented a specimen of a pregnant uterus and Dr. Lutz presented William Hunter's plates of the gravid uterus. The discussion was continued by Drs. Funkhouser, Meisenbach and Baldwin, and closed by Dr. Padberg.

Dr. R. Emmet Kane read the report of the 1913 Ethics Committee.

It was moved and seconded that this report be adopted. Motion carried.

Dr. E. J. Goodwin, secretary of the Missouri State Medical Association, made the following remarks on the work of the Ethics Committee.

Dr. Goodwin: I think we all agree that this is a very important report. It is the first report of the Committee on Ethics. The revelations that have been placed before us are confirmatory of many rumors that have been current in the past in the profession, but here we have concrete evidence of faults that received correction. In this committee the society has established for itself a door of communication with the actions of its members which it should always have open. We have our organization in splendid working condition at the present time, but we have never taken full advantage until now of the means that we have at hand for controlling the action of members when those actions bring disrepute on the profession as a whole. This report for the first time emphasizes and brings to our notice what our society stands for so far as protecting our own selves is concerned, and I believe it would be proper for the society to recognize the valuable service which this committee has rendered in gathering the information which they have placed before us to-night, and the recommendations they have formulated and which have been adopted, that may be the means of preventing many of the disreputable acts that have been so obnoxious to our creed, it would be proper for us to express to that committee by a vote of thanks the appreciation of the society.

Moved and seconded that a vote of thanks be tendered the 1913 Ethics Committee for their splendid work. Motion carried.

Moved and seconded that the assistant secretary write a letter to Dr. F. C. E. Kuhlmann, secretary of the society, expressing the society's sympathy on his recent bereavement. Motion carried.

Moved and seconded that the secretary write a letter to each member of the city council calling their attention to and enclosing a copy of the resolutions previously sent to his Honor the Mayor, in reference to the fly-screening ordinance. Motion carried.

Adjourned at 11:10 p. m.

Meeting of February 7

The meeting was called to order at 8:50 p. m., the president, Dr. A. F. Koetter, in the chair.

The scientific program consisted of the following.

The chair announced that the patient of Dr. Alex. E. Horwitz had developed a pneumonia, and therefore his case could not be presented to-night.

Dr. A. Edw. Meisenbach illustrated x-ray plates and presented the following pathological specimens:

Multiple abscesses of right kidneys, gonococcus infection; multiple abscesses of right kidney, colon bacillus infection; hydronephrosis pelvic; hydro-nephrosis total; cystic degeneration of lower half of right kidney; specimen of large bowel with trans-planted ureters; mulberry calculus removed from the pelvis of left kidney and x-ray plate showing same.

Dr. James Moores Ball read a paper entitled "Lost Anatomical Pictures and Plates," with lantern slide demonstrations.

The secretary read the following letter:

January 23, 1914.

Hon. F. C. E. Kuhlmann, Secretary,
St. Louis Medical Society,
3523 Pine Street, St. Louis, Mo.

Sir: In answer to your communication dated January 19, 1914, which the Postmaster General has referred to me, transmitting resolutions of the St. Louis Medical Society expressing its approval and appreciation for the activities of this department in connection with recent prosecutions of persons using the mails in furtherance of schemes to defraud, I have to state that the resolutions have been carefully noted, and I wish to assure you that the commendatory remarks contained therein are very much appreciated.

For your information, I transmit herewith a copy of the annual report of the chief inspector for the fiscal year ending June 30, 1913.

Respectfully,

(Signed) JOE P. JOHNSTON,
Chief Inspector.

January 24, 1914.

St. Louis Medical Society,
3523 Pine Street, St. Louis, Mo.

Gentlemen: Your letter of January 19, enclosing resolutions of approval and appreciation relative to the activities on the part of the government in connection with the Pure Food and Drugs Act, at hand, and in reply desire to thank you for this expression of appreciation.

Respectfully,

(Signed) L. F. KEBLER,
Chief Drug Division.

January 24, 1914.

Dr. F. C. E. Kuhlmann,
3523 Pine Street, St. Louis, Mo.

Dear Sir: This is to acknowledge receipt of your letter of the 23d instant, enclosing resolutions passed at the meeting of the St. Louis Medical Society on the 17th instant, for which I thank you sincerely. We highly appreciate the sentiments expressed by your association, but the real credit belongs to the inspection service, through Mr. William L. Reid, postoffice inspector in charge, of this city.

Assuring you of our appreciation and with kindest regards,

Very truly yours,

(Signed) COLIN M. SELPH, Postmaster.

On motion the society adjourned at 10:30 p. m.

MEETING OF THE COUNCIL

Meeting of February 11

The meeting was called to order at 8:30 p. m. by the president, Dr. A. F. Koetter. The minutes of the previous meetings of January 14 and 20 were read and approved.

All of the members of the council were present.

Visitors present: Drs. A. H. Sewing, A. E. Meisenbach, Robt. E. Sehluer, Ed Schisler, E. Lee Dorsett, John W. Marchildon, B. G. Benson, P. C. Scholz, Frank J. Lutz, E. J. Goodwin and Richard S. Weiss.

Dr. S. A. Weintraub and Dr. G. Wm. Poehl were elected to active membership.

Dr. A. H. Sewing, chairman of the Membership Committee, read a report which, on motion, was accepted.

The application of Dr. J. M. Threadgill by transfer from the Madison County (Illinois) Medical Society for active membership was read for the second time and he was elected by ballot.

The application of Dr. G. Canby Robinson for active membership by transfer from the Medical Society of the County of New York was read for the first time.

Dr. T. H. Slaughter's application for corresponding membership was read for the first time.

Dr. B. G. Benson, chairman of the Publication Committee, read the following report:

Your Committee on Publication, taking cognizance of the fact that quite a few of the members are dissatisfied with the way the *Bulletin* is being conducted, have formulated plans, based on suggestions of members of both society and committee, with a view of meeting these objections and making the *Bulletin* conform, as far as it is possible, with the views of a majority of the members.

Of the various plans and suggestions made the following would seem worthy of consideration, with a view of adopting one found to be the most practical and in keeping with the work in hand.

1. That the *Bulletin* remain and be conducted as it now is. This would mean, under favorable conditions, a possible surplus of from five to six hundred dollars, or at least that the cost of publishing would be covered, or partly so, save in the event that no advertising matter could be obtained.

2. That the advertising be dispensed with, but in every other respect the *Bulletin* remain the same. This would mean no surplus and the expense borne by the society.

3. That the *Bulletin* be limited to one issue per month, practically in the same form as at present, and consisting of from twelve to sixteen pages only. The intervening weeks to be taken care of by postal cards, containing the regular weekly program, and when necessary applications for membership, proposed amendments, etc. This would mean a very material reduction in the cost of printing.

4. The same as the foregoing, but without papers, discussions, abstracts, etc., which would mean a still greater reduction in cost.

5. That the *Bulletin* be a neatly printed pamphlet, of four or more pages, containing weekly program, announcements, etc., the printing of advertisements, papers, discussions and abstracts being entirely dispensed with. Roster numbers and annual reports to be issued entirely separate when occasion demands. Papers and discussions to be printed in the *Missouri State Journal*.

The main objection in our publication seems to be the advertising feature connected therewith. That this means the commercializing and is not in keeping with the dignity of a publication of the character of the *Bulletin* cannot be refuted.

The plea that it is a source of revenue with which we cannot do without should not go unchallenged. This would seem to be an admission of our inability to maintain our publication without outside aid on the one hand, or point to a class of members who do

not extend proper financial support on the other, both of which do not contribute to the dignity or standing in the community of a society such as ours, and both of which, we feel certain, are not merited in any event.

With men engaged in commercial pursuits advertising is a matter of business and not sentiment. Any one soliciting advertising matter soon becomes aware of this. One is often made to feel that too little is offered for value received, and in some instances contributions would be made in lieu of signing a contract for advertising. In short, the printing of advertising matter in our *Bulletin* is to be deprecated. It is not in keeping with the dignity of a publication of the character of the *Bulletin*. It has a tendency to lower and commercialize the same, in turn reflecting on the society in like manner. To say nothing of imposing a task on certain members, which, though willingly complied with, is unjust and uncalled for when viewed in the proper light.

It is the unanimous opinion of this committee that advertising in our *Bulletin* should be made a thing of the past, and that our publication should be in pamphlet form, as previously set forth, containing no advertising matter, papers, discussions, etc., this matter to be printed in the *Missouri State Medical Association Journal*.

Our contract with the printer expires next month. It is deemed advisable and expedient that this matter be given immediate attention. That we have been well served and that the committee have been extended every courtesy and help in the performance of their work by the present firm having our contract for printing, ought here to find mention.

In the matter of price, some difference of opinion exists. This being a matter of business the committee feels that the element of competition should enter into the renewal of our contract.

Accordingly bids from another concern were obtained. They agree to accept and guarantee to do satisfactory work in every respect at strikingly lower figures than the present incumbent is asking. This committee respectfully asks instructions and advice as to the final disposition of this matter.

Lastly, in the matter of obtaining copy intended for publication in the *Bulletin*, committee members and others seem to forget all about this matter until attention is called thereto, waiting until the very last moment to present said copy, greatly to the annoyance of every one concerned.

Respectfully submitted,

(Signed) B. G. BENSON, Chairman.

F. C. ESSELBRUEGGE,

ARTHUR GUNDLACH.

Dr. Funkhouser moved that the report of the Publication Committee be accepted. Seconded and carried.

The council instructed the committee to ask for bids from other companies, and to make a report on this matter at the next council meeting. The Publication Committee presented a bill of \$10.21 for stationery and stenographic services, which was allowed.

Dr. Frank J. Lutz, chairman of the Library Committee, read the following report:

February 9, 1914.

To the President and Council of the St. Louis Medical Society:

Gentlemen—The Library Committee has instructed me to submit for your consideration and approval the following budget for the library for the coming year, namely:

For subscription to journals.....	\$580.00
For binding	300.00
For the purchase of books.....	300.00
For salaries	720.00
For incidentals	100.00

A total of\$2,000.00

The committee wishes also to call your attention to the fact that all of this money need not be available at the beginning of the year, but should be at the disposal of a committee during the fiscal year.

We wish also to call your attention to a rule for which we ask your approval. The library should continue to be a "Reference Library," except that books and bound journals may be loaned to members for a period of not longer than three days, upon the written receipt of the borrower. No numbers of current journals shall be removed from the library.

Your committee recommends certain alterations in the arrangement of the library, whereby additional reading room space will be secured and access to the journals be made easier, and we suggest that the House Committee be authorized to have the work done.

The committee also wishes to call the attention of this board to a notice already published in the *Bulletin*, inviting requests for additional journals or for purchase of such books as the appropriation may warrant.

Dr. Lutz stated that \$2,000 is the expense the committee calculated for maintaining the library. This does not include light, janitor service, carpenter work, such as the removing of book stacks, etc.

After some discussion, Dr. Funkhouser moved that the Library Committee be allowed \$1,700 for the present.

Seconded and carried.

On motion the rules of the library as suggested by the Library Committee were adopted.

The treasurer was also instructed to keep a separate account of the subscription to journals, books, etc., and everything purchased by the Library Committee.

Dr. Schisler, chairman of the Committee on Ethics, made a report for his committee as follows:

To the Members of the Council of the St. Louis Medical Society:

The Committee on Ethics wishes to report that they organized February 8. The chairman, Dr. Schisler, appointed L. C. McAmis temporary secretary. In view of the fact that one member, Dr. S. Moore, had left the city for an indefinite period, we wish to recommend to the council that an appointment be made as soon as possible; unfortunately the work is piling up. On account of Dr. Moore's absence no other business was undertaken at this time.

Respectfully,

(Signed) E. SCHISLER, Chairman.

L. C. McAMIS, Temporary Sec.

The resignation of Dr. Sherwood Moore as a member of the Ethics Committee was accepted.

On motion, Dr. Joseph Charles was elected a member of the Ethics Committee to serve the unexpired term of Dr. Sherwood Moore.

With reference to the Doctors' Exchange, as reported on by the Committee on Ethics, the council decided to remain neutral.

Dr. C. E. Burford, chairman of the House Committee, read the following report:

To the Council of the St. Louis Medical Society:

The House Committee begs leave to submit the following report:

The committee, in conjunction with the chairman of the Library Committee, have gone through the buildings owned by the society and have noted the following repairs and improvements as very urgent:

Electric wiring and installation of fixtures throughout the old building, the same at an estimate cost of one hundred and eighty dollars (\$180) for wiring, and fifty-five (\$55) for lights and fixtures. This we believe should be done at once in order to lessen the fire risk. We have had two rooms and passageway in basement and sleeping room for janitor on third floor calcimined, this being necessary for emergency improvement for

living and sleeping purposes for new janitor, which we have engaged at twelve dollars (\$12) per week.

We have received the following estimate for decorating throughout the building:

We have not received an estimate on carpenter work necessary, but would suggest it might be better to hire a carpenter by the day to do this work, the cost of which should not be great.

Respectfully submitted,

(Signed) A. H. HAMEL,

C. E. BURFORD, Chairman.

Dr. Bliss moved that the Supply Committee be authorized to purchase a typewriter through the Publication Committee, as suggested by Dr. Goodwin, and also authorized the Supply Committee to purchase a desk chair. On motion of Dr. Amerland, the treasurer was instructed to forward \$10 for office expenses to the stenographer. Seconded and carried.

Dr. Amerland, chairman of the Auditing Committee, reported that he had renewed the treasurer's bond.

The council's attention has been called to the proposed new Infectious Hospital, that the money had been appropriated, but no progress is being made because it is being held up by the Board of Public Improvements.

On motion this matter was referred to the Committee on Health and Public Instruction, and the committee instructed to communicate by letter with the hospital board and inquire why the Infectious Hospital is not being built. Seconded and carried.

The assistant secretary read a letter from Dr. George H. Kuper, asking for reinstatement as a member in the St. Louis Medical Society.

On motion the action of the council at the meeting of January 14, accepting the resignation of Dr. Kuper, was rescinded.

The assistant secretary read letters from Dr. Richard L. Barrington, Mr. M. C. Elliott, secretary of the Reserve Bank Organization Committee at Washington, D. C., Miss Margaret McClure, secretary Visiting Nurses' Association; Mr. W. F. Saunders, secretary and general manager of the Business Men's League, and Mr. Arthur MacDonald of Washington, D. C., which, on motion, was referred to the Committee on Health and Public Instruction.

The assistant secretary read the resignations of Drs. Adelheid C. Bedal and E. E. Furney as active members, and Otto C. Horst and H. L. Freeland as corresponding members, which were, on motion, accepted.

The secretary was instructed to notify Dr. George M. Kesi, of the Public Health Service of Port Huron, Mich., that upon receipt of \$4 dues he could become an associate member.

The assistant secretary read a letter from Dr. B. N. Spcer of Hot Springs, Arkansas. The secretary was instructed to forward the same to the *New St. Louis Star*.

The secretary read a letter from Dr. J. L. Marder, which was referred to Dr. E. J. Goodwin, secretary Missouri State Medical Association, for reply.

The assistant secretary read a letter from Mrs. Philip Moore, chairman Committee on Speakers, for the St. Louis Pageant.

Dr. Runkhouser addressed the council on Medical Library Association matters.

On motion the council adjourned at 12:20 a. m.

Meeting of February 14

The meeting was called to order at 8:50 p. m. by the president, Dr. A. F. Koetter.

Dr. Ellsworth Smith read a paper entitled "The Present Status of the Treatment of Pneumonia."

Discussed by Drs. George Dock, G. Canby Robinson, Fred M. Haines, Amand Ravold, Wm. Porter, and closed by Dr. Smith.

Dr. O. H. Brown presented a case of "Syphilis of the Lung," exhibited by x-ray plates.

Discussed by Drs. Wm. Porter, M. M. Meyers, Geo. Dock, Amand Ravold, L. C. Hemplemann, and closed by Dr. Brown.

Dr. A. E. Taussig read a paper entitled, "The Present Status of the Treatment of Extreme Cardiac Decompensation."

Discussed by Drs. Jerome E. Cook, George Dock, Ellsworth Smith, Edward Richter, and closed by Dr. Taussig.

Adjourned at 11 p. m.

Meeting of February 21

The meeting was called to order at 8:40 p. m., by the president, Dr. A. F. Koetter.

The scientific program consisted of the following:

Dr. John W. Marchildon presented a case of "Sarcoma on the Right Side of the Head Treated with Radium," with demonstration of patient.

Dr. L. J. Oatman presented a case of "Epithelioma of the Tongue," excision and application of radium done in New York, with demonstration of patient.

Dr. Richard S. Weiss presented a case of Von Recklinghausen's disease and a neuro-fibromatosis cutis.

Prof. LeRoy McMaster of Washington University by invitation read a paper entitled, "Physical and Chemical Properties of Radium," with exhibition of specimens from Colorado, carnotite and Colorado pitch blende and also exhibited U. S. Bulletin No. 70, Department of the Interior of the Bureau of Mines.

Prof. L. F. Shaeckell of St. Louis University by invitation read a paper entitled, "Pharmacology and Therapeutic Application of Radium." (Extract of the literature.)

Dr. Martin F. Engman introduced Dr. George M. MacKee of New York to the society, who read a paper entitled, "The Massive Dose of the X-Ray with Special Reference to the Treatment of Cancer," illustrated with lantern slides.

The papers were discussed by Drs. Martin F. Engman, W. H. Cameron of Pittsburgh, Pa., Dr. MacKee closing.

Dr. Cameron demonstrated some specimens of radium during his discussion.

Dr. R. Emmet Kane reported for the committee of twelve which was appointed for the mass meeting of citizens with reference to the menace of quackery.

Dr. Kane moved that the St. Louis Medical Society congratulate the *New St. Louis Star* and the Hon. Howard Sidener on the success in prosecuting the quacks and charlatans who carried on their nefarious practice in St. Louis.

Average attendance 151.

F. C. E. KUHLMANN, M.D., Secretary.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI, (ST. LOUIS)

The regular meeting of the society was held at the City Hospital, February 5. The program consisted of the following:

Two cases of Pneumothorax, by Dr. Frank Rathbun and Dr. M. Levy. Discussion opened by Dr. L. S. Luton and Dr. O. H. Campbell.

An unusual case of Tabes, by Dr. Sam Norris. Discussion opened by Dr. M. Hoge and Dr. C. Chaddock.

A case of Lipoma of Labia Majora, by Dr. Hourn. Discussion opened by Dr. F. J. Taussig.

JACKSON COUNTY MEDICAL SOCIETY

The Jackson County Medical Society held five sessions in February, all of them well attended and productive of earnest and beneficial discussions. The program consisted of the following:

TUESDAY EVENING, JANUARY 27

1. Report of a Case of Pellagra with Lantern Slide Demonstration (twenty minutes)...E. L. Parker
2. The Use of Egg Membrane Grafts in Surgery. Case Reports, Including a Third Degree Burn Involving Three-Fourths of the Body (twenty minutes)Stanley Newhouse
3. Papilloma of the Bladder with Lantern Slide DemonstrationsLeon Rosenwald

TUESDAY EVENING, FEBRUARY 3

1. Posture in Health and Disease (twenty minutes)Robert M. Schaufler
2. Prevention of Deformities in School Children (twenty minutes)Ben Belove
Opening discussion by Drs. J. D. Griffith, Francisco and Walter Sutton.
3. Vaccine Treatment of Typhoid Fever in ChildrenJ. E. Hunt
Opening discussion by Dr. Milne.

TUESDAY EVENING, FEBRUARY 10

1. Fixation of the Colon for Ptosis (twenty minutes)H. E. Pearse
2. Pericolicitis and Allied Conditions About the Ileocecal Junction (twenty minutes)Jabez N. Jackson
Opening Discussions by Drs. Binnie, Hertzler and Hill.

TUESDAY EVENING, FEBRUARY 19

1. Diagnosis in Genito-Urinary Surgery (twenty minutes)Clarence Capell
Discussion from Standpoint of the X-Ray (fifteen minutes)E. H. Skinner
2. Carcinoma of the Prostate.....E. G. Mark

EYE, EAR, NOSE AND THROAT SECTION

THURSDAY EVENING, FEBRUARY 12

1. Presentation of Cases, Specimens, Etc.
2. The Use of Jackson's Crossed Cylinders in Estimating Refraction.....J. W. Kimberlin
3. Hygiene of the Eye.....W. H. Schultz
4. Cholesteatoma of the Orbit.....A. W. McAlester

PLEDGE AND DECLARATIONS

One of the most important actions of the society was the adoption of a "Pledge and Declarations," which each member has been requested to sign and all new members will be required to sign before being admitted. While one's signature to an oath or pledge or declaration does not in itself make one good or righteous, nevertheless its publication and open support will inevitably cause one to hesitate before doing a wrong or breaking a pledge—a strength in time of temptation and a bulwark of defense for higher principles of conduct. The pledge and declarations follow:

Recognizing that the Jackson County Medical Society seeks to develop, exemplify and enforce the highest traditions of our calling, I hereby pledge myself, as a condition of membership in the society, to live in strict accordance with all its principles, declarations and regulations. In particular I pledge myself to pursue the practice of our profession with thorough self-restraint and to place the welfare of my patients above all else; to advance constantly in knowledge by the study of professional literature, the instruction of eminent teachers, interchange of opinion among associates, and attendance on the important societies and clinics; to regard scrupulously the interest of my professional brothers and seek their council when in doubt of my own judgment; to render willing help to

my colleagues and to give freely of my services to the needy. Moreover, I pledge myself, so far as I am able, to avoid the sins of selfishness; to shun unwarranted publicity; dishonest money-seeking and commercialism as disgraceful to our profession; to refuse utterly all secret money trades with consultants and practitioners; and, when acting as consultant, to teach the patient his financial duty to the physician and to urge the practitioner to obtain his reward from the patient openly; to make my fees commensurate with the service rendered and with the patient's rights; and to avoid discrediting my associates by taking unwarranted compensation. Finally, I pledge myself to cooperate in advancing and extending, by every lawful means within my power, the influence of the Jackson County Medical Society.

Signed and subscribed by

RELATION TOWARD MEDICAL PUBLICATIONS

The society gave very forcible expression of its attitude toward medical publications which do not uphold the dignity and prestige of the profession, and adopted resolutions that will inspire a higher and nobler spirit governing the professional conduct of every member and impress on all that they owe a serious duty to the organization which is striving to improve the conditions surrounding the practice and science of medicine and eradicate all baneful influences. The resolution reads:

WHEREAS, The medical journal, "*The Medical Herald*," formerly published in St. Joseph, Mo., now in Kansas City, Mo., carries in its advertising columns notices of institutions, remedies and appliances which are not sanctioned by the American Medical Association, of which this organization is an integral part. Therefore be it

Resolved, That we, the Council of the Jackson County Medical Society, recommend that all members of this society refuse to serve, or allow their names to appear, as associate, contributing or department editors on the staff of this periodical, and further refuse to contribute to its literary columns, and likewise refuse to display their professional cards in its pages until such time as its advertising standards are made to conform to those of the American Medical Association.

OUR POLICY IN RE PRESS PUBLICITY

The Jackson County Medical Society has spoken and legislated in no uncertain terms on the subject of publicity and newspaper notoriety in reference to surgical operations and methods. The purpose for such action is evident. Ethics is always involved, and quite invariably the sensational report gives to the public a wholly false idea of the medical or scientific facts connected with the case in question.

The recent past has seen press space given to surgical work, in two specific cases, done by members of this society. In neither instance was the publicity of benefit to the public, and in one the raising of a biological and physiological question which does not exist, is so illogical and unscientific that while we are perfectly justified in having such presented for discussion in the society, it should be our determination to keep all such matter from the newspaper public.

It is the prayer that both officers and members of this society do their utmost, in the future, to support the ethics and scientific dignity of the local medical profession.

KANSAS CITY'S POSITION IN WORLD MEDICINE

Young physicians who have been infected with the micro-organism of industry sometimes endeavor to excuse their lack of accomplishment by claiming that

Kansas City presents no opportunities for advanced work in medicine. It is useless to point out to these men that Beaumont performed his celebrated experimental studies in digestion at an obscure army post, or that Koch perfected his epoch making researches on tuberculosis while residing in a country village. To bring the matter nearer home, a text-book on surgery, written by a Kansas City man, is now in its sixth edition, and is used in all parts of the civilized world. Another of our local men was the first to emphasize the importance of the peculiar ileocecal web which so frequently complicates obscure abdominal disorders, and the membrane now bears his name almost universally, and a third has not only written a volume on tumors which is frequently quoted, but he is also an international authority on local anesthesia.

So one may safely say that Kansas City is advancing in the surgical field, at least. In medicine and the specialties we have not accomplished so much, but judging from the signs of the times, we are on our way. One of our younger men has published important researches on blood platelets in health and disease; another has contributed important work on the blood changes occurring in chronic constipation, and a third, valuable therapeutic suggestions in the treatment of diabetes, while another, a genito-urinary surgeon, has invented an air expanding urethroscope which has proved both valuable and popular. So if any of us is yearning for a chance to become famous in the domain of medicine, it is not necessary to wander far afield. Opportunity is waiting within the next block. Work, persistently and honestly. But work and stick.

OFFICIAL RESPONSIBILITY

The recent action of the Kansas City Board of Health in disciplining two members of the Emergency Hospital staff for dereliction in office is to be highly commended. The practice of medicine stands for faithfulness to duty, consideration of those in need and the immediate relief of suffering, be that physical or mental.

A physician accepting a political or public appointment to an office in the department of health assumes double responsibility. He is being paid through public funds raised by the citizens, and his services are for and to the taxpayers, their families and all who may be resident in the city and under its protection; and further he is usually a member of organized medicine, which stands for the highest in conduct and skill, and vouches for its members. Hence the individual is responsible to the profession of which he is a unit.

It is to be hoped that this "suspension without pay" may be salutary in its results and that greater faithfulness and efficiency may be the outcome in this important municipal department.

NEW MEMBERS

The following were elected to membership during the month: Calvin L. Cooper, R. C. Henderson, Oliver S. Gilliland, Lindsay S. Milne and B. T. Sharp. By transfer: John O. Skinner and M. V. Stephenson.

DEATH OF DR. WILLIAM WALLACE STEVENS

Dr. W. W. Stevens, who was taken so suddenly from our midst by death February 21, was a gentleman in the best sense of the word. Always pleasant and with a word of good cheer, he carried with him an atmosphere of agreeable companionship. His friends were numerous both in and out of the profession, while with his closest acquaintances he formed strong friendships. He was efficient in his specialty, and the surgeon or physician was fortunate who secured his services. Efficiency and promptness combined, made him much in demand. In fact, he was a leading anesthetist of the West.

The medical profession of Kansas City has suffered greatly in his early death. The unfortunate loss, through meningitis two years ago, of his wife coupled with this tragic death by accident of the doctor brings with double force the bereavement to his mother, brother and especially to the little daughter of eight years. Dr. Stevens will long be remembered for his many good qualities.

CARTER-SHANNON COUNTY MEDICAL SOCIETY

At a regular meeting of the Carter-Shannon County Medical Society held in the office of the secretary, at Van Buren, January 13, the following officers were elected for the ensuing year: Dr. Adolphus R. McNeal, president; Dr. P. D. Gum, vice-president; Dr. J. A. Chilton, secretary-treasurer. Dr. T. W. Cotton was chosen as delegate to the coming meeting of the Missouri State Medical Society, with Dr. Frank Hyde as alternate.

The time allotted to the meeting was much taken up in the election of officers. However, the subject of pneumonia was discussed as also was a case of gunshot wound of both legs, of a small boy, 10 years of age, under the care of Dr. Cotton. The doctor was compelled to amputate one leg, but was able to save the other.

J. A. CHILTON, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met at Harrisonville, February, 12, with the following members present: T. W. Adair, H. S. Crawford, A. R. Elder, M. P. Overholser, R. D. Ramey, J. S. Triplett and A. C. Wunnieke.

The program was arranged especially for the public and an invitation was extended to everyone to attend, but the day was very stormy and very few were in attendance. The following program was carried out, however, as arranged: "Cardio-Vascular-Renal Disease," by Dr. M. P. Overholser; "Typhoid Fever," by Dr. J. S. Triplett; "Malaria," by Dr. T. W. Adair. These papers were all excellent preparations, of special interest to the public. The society decided to have brief abstracts of these papers published in the county newspapers.

Dr. George H. Hoxie of Kansas City was scheduled to speak at night on the subject, "The Importance of Preventive Medicine." On account of the severe storm this address was postponed until Tuesday evening, February 17. At that time Dr. Hoxie delivered an address to a large and appreciative audience. The society hopes to have another public meeting later in the year as the public in general are getting interested in public health problems.

Dr. B. L. Philips and Dr. H. M. Grant were elected to membership in the society.

H. S. CRAWFORD, M.D., Secretary.

FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society held a regular meeting in Union on Tuesday, Feb. 3, 1914. The following members were present: O. L. Muench, H. A. Booth, John Isbell, I. M. Owens, J. P. Dunigan, F. P. Dunn, G. W. Reeves, O. N. Schudde, A. L. McNay, W. P. Mattox, D. E. Williams, E. A. Stierberger and H. A. May.

Dr. Walter S. Rutherford, Sullivan, Mo., was elected to membership in the society.

After routine society work was completed, Dr. O. L. Muench read a paper on "Adrenalin in Ophthalmic Diseases," which was discussed by a number of the members present.

The next regular meeting of the society will be held in Union, on the first Tuesday in May, 1914.

H. A. MAY, M.D., Secretary.

GREENE COUNTY MEDICAL SOCIETY

The Greene County Medical Society has entered on its duties with prospects of an excellent year's work. The newly elected president, Dr. G. B. Lemmon, is well aware of the enormous amount of work that can be accomplished by the society and he has organized his forces with the determination that this shall be the best year in the history of the society. With this end in view, and knowing the value to the society of a good program committee, he appointed a committee consisting of Drs. E. C. Roseberry, S. W. Tickle and A. L. Anderson to prepare a program for the year. This committee was ably assisted by the president with a few suggestions from the secretary and the result of their efforts is shown in the accompanying program. An essayist from a distance or from another society will create a greater interest and more enthusiasm among the members than can one from your own society, therefore our committee has procured several speakers from other societies, who will address us on subjects of importance during the year. The Greene County Medical Society is willing and ready to reciprocate with any county society in the preparation of a program. I consider it one of the best ways of stimulating activity in the society.

The Legislative Committee, composed of Drs. E. F. James, T. A. Coffelt and J. M. Potts, are always on the alert to see that illegal practitioners, quacks and charlatans do not impose on the public and the organized profession. Chiropractors have decided Springfield is not a good city for their work.

On January 9, Dr. E. J. Goodwin, secretary of the State Medical Association, was with us and gave a very interesting address on matters pertaining to county, state and national organizations. We are always glad to have Dr. Goodwin with us.

Our society is growing every year. A few years ago it required quite an effort to induce eligible physicians to join the county society, but now they begin to see the advantages of the society and are seeking admission. I know of only one eligible physician in Springfield who is not a member of the Greene County Medical Society. I trust the infection will spread until every eligible physician in the county will be inoculated with a determination to join us.

PROGRAM FOR 1914

January 9.—Address by Dr. E. J. Goodwin, secretary of Missouri State Medical Society.

January 23.—Annual banquet, at Perkins' cafe.

February 13.—The Recent Epidemic of Jaundice Among Children, by Dr. Wm. Rienhoff. Discussion by Drs. Anderson and N. C. Williams.

February 27.—Arteriosclerosis and Its Relation to Life Insurance Examination, by Dr. F. B. Fuson. Discussion by Drs. Boyd and Dorrell.

March 13.—Ophthalmia Neonatorum, by Dr. T. O. Klingner. Discussion by Drs. Love and Bailey.

March 27.—Medical Economics, by Dr. E. F. James. Discussion by Drs. Patterson and Peak.

April 10.—Paper by Dr. H. C. Shuttee, West Plains, Mo. Discussion by Drs. Reinhoff and Sherman.

April 24.—Symposium. Inflammatory Conditions of the Female Pelvis: The Medical Aspect, by Dr. J. C. Matthews; the Surgical Aspect, by Dr. C. W. Russell. Discussion by Drs. Pipkin and Roseberry.

May 8.—Treatment of Severe Prolapsus Uteri: Operative and Nonoperative, by Dr. H. S. Crossen, St. Louis (author of Crossen's Gynecology).

May 22.—Address by George Pepperdine, attorney at law. Discussion by Drs. Camp and Fuson.

June 12.—Ethics and Incomes, by Dr. C. E. Fulton. Discussion by Drs. Russell and Wilbur Smith.

June 26.—Smoker.

SUMMER ADJOURNMENT DURING JULY AND AUGUST

September 11.—Symposium. Appendicitis: The Medical Aspect, by Dr. J. M. Potts; The Surgical Aspect, by Dr. H. A. Lowe. Discussion by Drs. Barnes and Horst.

September 25.—Tuberculosis: Some Practical Points, by Dr. B. Hughes, superintendent of State Tuberculosis Sanitarium, Mt. Vernon, Mo.

October 9.—Puerperal Eclampsia, by Dr. Wm. Smith. Discussion by Drs. Ralston and Cox.

October 23.—Address by speaker from Kansas City.

November 13.—Arteriosclerosis and Its Treatment, by Dr. A. L. Anderson. Discussion by Drs. Beattie and Dewey.

November 27.—Early Evidences of Mental Instability, by Dr. S. A. Johnson. Discussion by Drs. Hill and Walker.

December 11.—Annual election of officers.

December 25.—Christmas adjournment.

T. O. KLINGNER, M.D., Secretary.

LIVINGSTON COUNTY MEDICAL SOCIETY

The Livingston County Medical Society while active in keeping up dues to state society for two years, has been somewhat dormant in society work.

At our first meeting this year under our new president, Dr. B. N. Stevens, the society voted to hold semi-monthly meetings during January, February, March and April, and we have been doing so since, having interesting papers, good attendance and active work. The society adopted the following resolutions unanimously:

Resolved, That society members discontinue professional cards in daily papers after March 1, 1914;

Resolved, That members withhold their names in reporting births and operations to the newspapers;

Resolved, That members refrain from allowing their names to appear on hotel registers, on programs, or in advertising in any manner whatsoever;

Resolved, That no member should take contract practice from any lodge or society.

Some think this is radical to the extreme, a spasm of ethics, but every member present voted for the resolutions and will live up to them. The society has added three new members this year.

The society will be the host to Grand River Eleventh District Medical Society March 19. We are hoping for a large attendance and want Chillicothe to be the permanent meeting place of the district society, and that the annual meeting of the society will be the best district society in North Missouri in the future.

J. C. SHELTON, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at the Morrisville College Chapel at 10:30 a. m., December 8, with the following physicians present: Drs. R. W. Paris, R. Lee Russell, J. A. McLaughlin, R. D. Dill, A. J. Stefflebaum, W. T. Meyers, C. H. Lundy, J. E. Loafman, W. G. Drake, J. F. Roberts, J. W. Miller, W. Glenn Miller, also Drs. H. A. Lowe and E. C. Roseberry of Springfield, Mo., honorary members. After a roll call and the reading and approval of the minutes of the last meeting, Drs. W. G. Drake and B. E. Taylor were elected members of the society. Dr. Paris requested that his successor appoint a member of Committee on Public Health and Legislation and one on Public Health and Education for the county.

Some clinical cases were taken up and referred to a committee for examination and report. Dr. H. A. Lowe of Springfield, read a paper on "Surgery and Obscure Menstrual Disorder," which dealt with uter-

ine pathological conditions and the inadvisability of operations in many cases now operated.

A former case of chorea and one of tuberculosis was again presented by Dr. W. T. Meyers and discussed by the society. Dr. C. H. Lundy read a paper and reported a case on acute poliomyelitis, which was discussed by the society.

Dr. Perry, president of Morrisville College was introduced to the society and made some well-chosen remarks welcoming the doctors to the city, after which the members and guests together with a goodly number of college people and others, were invited over to the dormitory to a dinner especially prepared by the young ladies of the Domestic Science Department of Morrisville College, at the request of the local members of the profession at Morrisville.

After partaking of a five-course turkey dinner and listening to a very enjoyable program consisting of instrumental and vocal music, impersonations and recitations by the young people of the college, the society resumed the afternoon session.

Drs. Roseberry, Russell and Drake, as a committee reported on the cases referred to them at the forenoon session.

Dr. J. E. Loafman reported a case of typhoid fever.

Dr. Roseberry was excused and was requested to read a paper on "Cholecystitis" at our next regular meeting in March.

Officers for the year 1914, consisting of the following members were elected: R. Lee Russell, president; A. J. McLaughlin, vice-president; J. F. Roberts, secretary-treasurer; R. W. Paris, delegate; W. D. Drake, alternate.

Dr. W. Glenn Miller's application for membership was received and referred to the board of censors.

Drs. Lowe and Roseberry were appointed a committee on resolutions relative to the death of Dr. Madry, district counselor.

On motion society adjourned to meet at Humansville on the second Tuesday in March, 1914.

J. F. ROBERTS, M.D., Secretary.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session in Marshall, February 10, at 2 p. m., President Tuttle in the chair.

Following the reading and approval of the minutes of the previous meeting, Dr. Manning reported for the Hospital Committee to the effect that the school board was favorable to converting the North school building into a hospital, but that a vote would be necessary. Several citizens who were approached thought an endowment could be raised. The committee asked further time.

Dr. Tuttle read a letter from Dr. Lutz of St. Louis promising an open lecture on cancer to be given the evening of April 16, following the district meeting. It was suggested that Dr. Lutz be asked to address the society at the afternoon session. Drs. A. E. Gore and B. F. Manning were appointed as a publicity committee regarding the lecture of Dr. Lutz.

The program consisting of discussions relative to diagnosis was taken up. Dr. Manning presented general methods and considerations of accurate diagnosis. Dr. John R. Hall of Napton discussed laboratory diagnosis. Dr. R. P. Price of Slater read a paper on "Mechanical Aids of Diagnosis." A general discussion followed.

The program committee reported the following for the next meeting: "Historical Points of Medicine," by Dr. D. C. Gore.

Society adjourned to meet March 10 at 1 p. m.

G. A. AIKEN, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms, Wednesday evening, February 18, the president, Dr. J. J. Bansbach, in the chair. Twenty-eight members were present.

The committee on Public Health and Legislation were granted until our next meeting to make their report on the Neal Institute and Dr. Daniel McPhail.

On motion of Dr. P. I. Leonard, seconded by Dr. Ladd, the secretary was instructed to place the matter of changing the name of our society to the "Buchanan County Medical Society," in the hands of our counselor, Dr. L. A. Todd.

Dr. A. L. Gray presented an invitation from Dr. Shelton of Chillicothe, inviting the members to attend a District Society meeting to be held at Chillicothe, March 19.

At the request of the State Committee on Public Policy and Legislation, the president appointed Dr. P. I. Leonard, a committee of one to represent this county on the state committee.

Dr. J. H. White, Surgeon U. S. Department of Health, delivered an instructive and interesting address on "The Scope of Public Health and Its Relation to Local Conditions."

On motion the society adjourned.

W. F. GOETZE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SEROBACTERINS.—Serobacterins are emulsions of bacteria which have been treated by the application of the corresponding specific immune serum. Bacteria as treated are supposed to contain specific amboceptors so that immediate union with the complement of the patient's serum is said to occur. Hence, their action is supposed to be more rapid than that of ordinary vaccines. They are also said to be free from the negative phase and the general and local reactions produced by ordinary vaccines.

STAPHYLO-SEROBACTERIN, MULFORD.—This is a sensitized Staphylococcic Vaccine. H. K. Mulford Co., Philadelphia, Pa.

STREPTO-SEROBACTERIN, MULFORD.—This is a sensitized Streptococcic Vaccine. H. K. Mulford Co., Philadelphia, Pa.

TYPHO-SEROBACTERIN, Mulford.—This is a sensitized Typhoid Vaccine. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 7, 1914, p. 457).

DISINFECTANT KRELOS, MULFORD.—A solution of cresols or higher phenol homologues and rosin soap. The phenol coefficient, ranging from five to seven, is stated on the label. It is an antiseptic, germicide and deodorant. Mulford Antiseptic Krelol is an almost black liquid, having a cresol-like odor forming a milk-like emulsion with water. The H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 14, 1914, p. 537).

ANTI-ANTHRAX SERUM, MULFORD.—It is prepared by immunizing horses against virulent anthrax bacilli. H. K. Mulford Co., Philadelphia, Pa.

ANTISTREPTOCOCCIC SERUM SCARLATINAL, POLYVALENT, MULFORD.—The serum of horses treated with streptococci taken from scarlet fever patients. The H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 14, 1914, p. 537).

CORPUS LUTEUM, CAPSULES.—Each capsule contains desiccated corpus luteum, Armour 0.3 gm. Armour & Co., Chicago.

CORPUS LUTEUM TABLETS.—Each tablet contains desiccated corpus luteum, Armour 0.13 gm. Armour & Co., Chicago (Jour. A. M. A., Feb. 21, 1914, p. 615).

GRANULAR EFFERVESCENT SALICYLOS.—Each 100 gm. contain strontium salicylate 6.54 gm., ammonium salicylate 6.54 gm. with an effervescent base of sodium bicarbonate, citric acid and tartaric acid. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Feb. 21, 1914, p. 615).

AMPHOTROPIN.—Hexamethylenamin camphorate, a compound of hexamethylenamin and camphoric acid. It combines the action of camphoric acid and hexamethylenamin, but is claimed to be free from the subjective gastric disturbances produced by camphoric acid and to be effective in smaller doses. It may be given dissolved in water or as Amphotropin tablets containing 0.5 gm. Farbwerke Hoechst Co., New York (Jour. A. M. A., Feb. 28, 1914, p. 697).

PROPAGANDA FOR REFORM

SAL HEPATICA.—Sal Hepatica, marketed by the Bristol-Myers Co., New York, has been refused recognition by the Council on Pharmacy and Chemistry because its composition is secret, because it is advertised indirectly to the public for the treatment of diseases, because exaggerated and unwarranted claims are made for its therapeutic qualities and because its name fails to indicate its chief constituents, but does suggest its use in liver disorders. The Council authorized publication of its report because the exploitation of Sal Hepatica is an important illustration of the way in which physicians are being made parties to the introduction to the public of a patent medicine the indiscriminate use of which must often have resulted in harm, direct or indirect (Jour. A. M. A., Feb. 7, 1914, p. 472).

ORRIN ROBERTSON AND HIS SEVEN SACRED OILS.—Robertson is a quack at present located at Arkansas City, Kans., who claims to remove gall-stones by means of "Seven Sacred Oils which grow in seven different climes." For the oil he claims "One oil acts specifically upon the entire head and throat. One oil acts directly upon the esophagus. One oil acts directly upon the stomach." And so it goes, each oil acting a little lower down, until we reach the seventh oil which "acts directly" on the rectum. Robertson also exploits a cure for cancer (Jour. A. M. A., Feb. 7, 1914, p. 473).

MU-COL.—"Mu-col for Cleansing Mucous Membranes" is a nostrum put out by the Mu-col Company (Inc.), Buffalo, N. Y. The following claims are made: "Mu-col obtains most gratifying results in catarrhal inflammations of the mucous membranes. Leucorrhea, tonsillitis, sore throat, cystitis, internal hemorrhoids, nasal catarrh and pus cases respond at once to irrigations with Mu-col solution. Strong solutions of Mu-col have proven of sterling value in treating hives, prickly heat, ivy poison, sunburn, eczema, typhoid and scarlet fever." Examination in the A. M. A. Chemical Labor-

atory showed Mu-col to be a mixture of sodium chlorid and borax, equal parts, with the addition of a small amount of aromatic substances (Jour. A. M. A., Feb. 7, 1914, p. 474).

PIORKOWSKI LABORATORIES NOT LICENSED.—The Public Health Service announces that statements which seem to emanate from the so-called Piorkowski Laboratories in various parts of the country to the effect that these laboratories have been licensed by the U. S. Public Health Service are incorrect. Instead, after inspection, a license has been refused the Piorkowski Laboratories of Berlin, Germany (Jour. A. M. A., Feb. 14, 1914, p. 553).

PYO-ATOXIN.—A box of Pyo-atoin was submitted to the A. M. A. Chemical Laboratory for examination. The box contained thirty black capsules having the appearance of some of the popular gonorrhea nostrums. While the synonym "Pheno-Methylene-Formate" suggested that Pyo-atoin was a definite chemical substance, the examination indicated that the powder contained in the capsules was a mixture of hexamethylenamin and methylene blue—two well-known drugs the value and limitations of which are known to the medical profession. Pyo-atoin is sold by H. O. Hurley, Louisville, Ky., and is said to be "An antitoxin agent indicated in gonorrhea, cystitis, pyelitis and bacteriuric conditions" (Jour. A. M. A., Feb. 14, 1914, p. 552).

HEX-A-LITH.—Hex-a-lith put out by the Smith-Dorsey Co., Lincoln, Neb., is said to be a combination of hexamethylenamin and lithium citrate. As lithium citrate has a tendency to render the urine alkaline and since hexamethylenamin acts only in an acid medium, the constituents of this preparation are physiologically incompatible (Jour. A. M. A., Feb. 14, 1914, p. 555).

WHEN IS A PATENT MEDICINE?—While some physicians and especially some medical journals have trouble in classifying certain proprietary medicines, drug departments in department stores find the problem a simple one. In recent Chicago newspapers advertisements for Fellow's Syrup of Hypophosphites, Glycothymoline and Sal Hepatica look perfectly at home with Peruna, Circus Liniment and Beecham's Pills (Jour. A. M. A., Feb. 21, 1914, p. 631).

LUCILE KIMBALL OBESITY CURE.—Lucile Kimball of Chicago comes to the obese with the message "I can make your fat vanish by the gallon." All that is needed, she says, is to take her treatment—no dieting, exercise or drugs are needed. The treatment consists of pink pills, which are reported to contain red pepper, menthol and bitters, probably gentian or quassia; brown tablets which the chemists declared to be an old fashioned cathartic pill and a powder, reported to consist of soap, Epsom salt and washing soda (Jour. A. M. A., Feb. 21, 1914, p. 631).

LOUISENBAD REDUCTION SALT.—This is a white powder sold by Karl Landshut, Chicago, and is to be used dissolved in a bath. The A. M. A. Chemical Laboratory reported the powder to be composed of sodium sulphate, sodium chlorid and potassium chlorid. It is hardly necessary to say that taking a bath in a tubful of water in which a tablespoonful of the mixture has been dissolved would have no other effect than that obtained from bathing in the same amount of water without the mixture (Jour. A. M. A., Feb. 21, 1914, p. 632).

EFFECT OF TARTRATES.—Many of the organic acids, such as citric and acetic, are burned up in the body, giving rise to carbon dioxide and water; thus sodium citrate, for instance, acts just like sodium carbonate

in the organism. On the other hand tartaric acid and its salts are for the most part not destroyed in the body and leave it in their original form and animal experiments have shown that large doses of tartrates may give rise to symptoms of nephritis. However, while the claim made for a certain baking powder that the tartaric acid of cream of tartar in it is "wholesome" is evidently unwarranted, W. Post has shown that in the doses in which tartrates in the form of purgative mixtures, etc., is ordinarily given, are probably without harmful effects (Jour. A. M. A., Feb. 21, 1914, p. 616).

ADMINISTRATION OF LECITHIN.—It has been shown many times that phosphorus in the form of organic compounds as it occurs in milk or in eggs probably changes in the body to phosphate and is subsequently elaborated into lecithin. In view of this there would seem to be no physiologic or biologic reason for preferring isolated lecithin as a medicament to milk or eggs. If it is believed that lecithin is indicated, the administration of one or two raw, or even cooked, yolks of eggs will supply all the lecithin that could be metabolized and presents it in a better manner than an artificial preparation (Jour. A. M. A., Feb. 21, 1914, p. 615).

EVERY WOMAN'S FLESH REDUCER.—This obesity treatment is sold by the Every Woman Company, Chicago, Ill., and is a white powder smelling strongly of camphor and is of the bath-powder type. Examination in the A. M. A. Chemical Laboratory indicated the powder to be a mixture of alum, Epsom salt with an effervescing base of citric acid and sodium bicarbonate or possibly sodium carbonate with a small amount of camphor (Jour. A. M. A., Feb. 28, 1914, p. 714).

"GET SLIM."—Jean Downs, New York, offers to reduce the obese with "a purely vegetable, pleasant, healthy drink." A box of "Get Slim" was examined in the A. M. A. Chemical Laboratory. It contained fifteen large envelopes, the same number of smaller envelopes and a package of powder. The large envelopes appeared to contain only sugar tinted pink. The contents of the smaller envelopes appeared to be tartaric acid, also tinted pink. The white powder was concluded to be sodium bicarbonate only. The sugar and tartaric acid powders are to be made into lemonade with the addition of lemon. The bicarbonate of soda is dissolved and the solution taken before meals (Jour. A. M. A., Feb. 28, 1914, p. 715).

PAM-ALA, ANOTHER WORTHLESS QUININ SUBSTITUTE.—According to advertisements Pam-ala, sold by the Pam-ala Company, New York, is "A new and efficient remedy for malaria." Its general characters, particularly its eumin-like smell, and also the advertising claims are very similar to Sinkina, a preparation which was shown to be worthless. Most of the testimonials sent out are rather old and are stated to come from physicians in Italy, Cuba, Porto Rico, Guatemala, etc. Two recent testimonials from physicians in the United States were investigated by the Council on Pharmacy and Chemistry and in each case it was found that the opinions had been based on insufficient trials and that the physicians on further use of Pam-ala had become convinced of its inefficiency. While the evidence indicated that the essential constituent of Pam-ala is oil of eumin, proven worthless in the investigation of Sinkina, a chemical analysis was not made by the Council because it was thought that the secrecy with which the identity of Pam-ala was surrounded and the extravagant and highly improbable claims were sufficient to condemn it (Jour. A. M. A., Feb. 28, 1914, p. 715).

BOOK REVIEWS

OBSTETRICS. A Manual for Students and Practitioners. By W. P. Manton, M.D., Professor of Obstetrics and Clinical Gynecology, Detroit College of Medicine, Detroit, Mich. Second edition, revised and enlarged; including selected list of State Board Examination Questions. 12mo, 292 pages, with 97 engravings. Cloth, \$1.00, net. Lea & Febiger, publishers, Philadelphia and New York, 1913.

An excellent little volume which affords the physician a means of refreshing the memory, and a most able assistant to the student in preparing for an examination on obstetrics. The work is well illustrated, and the typography is pleasing. The questions appended at the end of each chapter will be found very helpful. The present edition is practically a new book, the revision has been so thorough.

A PRACTICAL TREATISE ON MEDICAL DIAGNOSIS. For Students and Physicians. By John H. Musser, M.D., LL.D., late Professor of Clinical Medicine in the University of Pennsylvania; formerly president of the American Medical Association, etc. New (sixth) edition, revised by John H. Musser, Jr., B.S., M.D., Instructor in Medicine in the University of Pennsylvania; Assistant Physician to the Philadelphia Hospital; Physician to the Medical Dispensary of the Presbyterian Hospital; Physician to the Medical Dispensary of the Hospital of the University of Pennsylvania. Octavo, 793 pages, with 196 engravings and 27 colored plates. Cloth, \$5.00, net. Lea & Febiger, publishers, Philadelphia and New York, 1913.

The work has been very carefully edited and much of it rewritten since the former edition appeared, as necessitated by the enormous advances made in medical science during the years that have elapsed since the former issue. Much new material has been added to the sections on the infectious diseases, diseases of gastro-intestinal and urinary systems, the cardiovascular system and metabolic diseases. New sections have also been added to the discussion on the disturbances of the internal secretions. Functional tests dealing with organic efficiency receive further elucidation and elaboration in an added chapter and laboratory diagnosis has been brought to the level of the clinical laboratory possessed by the average medical man. Symptomatology and history as appearing in the former edition have been considerably abbreviated, with the addition of much new data on diagnosis.

MARRIAGE AND GENETICS. Laws of Human Breeding and Applied Eugenics. By Charles A. L. Reed, M.D., F.C.S., Fellow of the College of Surgeons of America, etc. Pp. 183. The Galton Press, Cincinnati, 1913.

Says the author in his preface: "This book was first conceived as a message from the operating-room, a danger signal or a series of danger signals from the hospital ward—a revelation from the council chamber, that great confessional of the medical profession. The motive . . . a desire to overcome in some measure the ignorance which in many instances keep innocent victims from protecting themselves and their offspring from disease and degeneracy." A very strong book, compelling and convincing in its clear and forceful style.

W. B. Saunders Company, Publishers of Philadelphia and London, have just issued an entirely new 88-page illustrated catalogue of their publications. It is an extremely handsome catalogue, descriptive in the truest sense, telling just what you will find in their books and showing you by specimen cuts, the type of illustrations used. Some 250 books, including thirty new books and new editions, are mentioned. A copy will be sent on request—and don't forget to mention THE STATE JOURNAL when you write.

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EDITOR

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COMMITTEE { S. P. CHILD, M.D.
 { M. A. BLISS, M.D.

ORIGINAL ARTICLES

PRACTICAL METHODS OF DIFFERENTIATING BETWEEN ACTIVE TUBERCULOUS LESIONS AND HEALED OR QUIESCENT ONES*

F. M. POTTENGER, A.M., M.D., LL.D.
MONROVIA, CAL.

It affords me great pleasure to address you to-night on the subject of the diagnosis of early clinical tuberculosis, one of the most important subjects in medicine.

During the last few years we have learned many things about this disease which have made us change our attitude toward it. We have changed its classification from that of a hopeless disease and made it one of the most curable of all chronic diseases. To-day a favorable result can be produced in from 60 to 90 per cent. of early cases of tuberculosis. After tuberculosis once assumes clinical importance and produces symptoms which are recognizable, it is very apt to pass on to a more advanced stage without giving warning; and, as this advancement occurs the chances of cure decrease from 60 or 90 per cent. to 40 or 60 per cent. After it reaches the moderately advanced stage it is only a short time until it is far advanced, cavities have formed and it has assumed what is usually considered the hopeless stage. Treat these advanced cases as you will, under the most favorable circumstances, and you can only produce a complete healing in a small percentage of them. To be sure an arrestment may be obtained in probably 40 per cent., but the time for obtaining the best result is gone.

No disease assumes a greater importance in medicine to-day than tuberculosis. This is not only true because of its great mortality, but because it is a disease which produces a long sickness and affects not only the patient but the entire family.

The most important factor in the attacking of this great scourge is early diagnosis. We talk

about it as though it were easy to make, but I assure you that it is not easy to make an early diagnosis of tuberculosis. To differentiate between healed, quiescent and active lesions requires considerable skill and care. In spite of the fact that we know how to make early diagnoses, most patients pass on beyond the early stage before the diagnosis is made.

Why is it that this disease is not diagnosed early? Whose fault is it? Some are inclined to blame the medical men entirely for this lack of early diagnosis, but I am glad to say that the blame does not all belong here. Often the patient does not present himself for examination when the lesion is small and if he does and the physician suggests a chest examination it is not uncommon for the patient to refuse to submit to it. If the physician does examine the patient and tells him that he finds that he has some trouble in the lung it is not uncommon to have the patient go to another physician and still another until he finds someone who is willing to give him the opinion that he desires.

On the other hand, there are a great many patients who do consult physicians, complaining of these early symptoms, without a diagnosis being made. For these, as a profession, we are responsible, and it is our duty to see that the number is reduced to the minimum.

Are there any simple methods which will suggest to us the probability of the presence of early tuberculosis? Are there any methods which will help us in the recognition of small lesions and in the differentiation between active and quiescent ones. These are the questions that I want to discuss to-night.

In order to understand what is meant by the early diagnosis of tuberculosis it is necessary for us to review briefly the pathology and life history of tuberculosis as a disease. We know that tuberculosis infects nearly all children. There is hardly a child among the cities' poor over the age of fifteen who is not already infected with tuberculosis. Observations have been made which show that as many as 95 per cent. of hospital children are infected with tuberculosis before they

* Read before the St. Louis Medical Society, Oct. 18, 1913.

reach the fifteenth year. Even among country children, we find, according to the report of Jakob, that 30 per cent. are infected by the time they reach the school age; and, most surprising of all, this same observer tested many children in the country districts where there had been no tuberculosis and where the children had not come in direct contact with people who had this disease and found 30 to 40 per cent. of them infected. This shows that our efforts in the prevention of tuberculosis must be directed toward childhood. We find children infected early. How this infection takes place we do not know. We do know, however, that the bacilli which produce infection in children come directly from some individual who has the disease. They may have been carried through food or through air. In these country districts where the children have not associated intimately with tuberculosis, it is possible that the infection might have taken place through food. In cities, however, and in homes where there is tuberculosis in the family, the source of infection is much more easily accounted for.

At first tuberculosis is a disease of the lymphatic system. Bacilli may enter the body in different ways, but usually we may assume that they enter through the mucous membranes of either the respiratory or alimentary tract. After they once pass through the mucous membranes they enter the lymphatic channels and pass to the nearest glands. The glands which are most commonly infected, whether the route of the infection be through the respiratory or alimentary tract, are those of the mediastinum. While this is primarily the seat of infection the disease extends, in a certain proportion of cases, probably about 60 per cent., to the lung. This extension may take place early in childhood or it may take place later in life. Why it extends we do not know. After the extension has occurred, the disease very often settles down, becomes quiescent, or goes on to a healing. In a certain proportion of cases it remains quiescent for a time and then breaks out again. In still another proportion of cases it goes on to the production of acute symptoms and is recognized as clinical tuberculosis.

We are led to believe that these early infections, whether they heal out entirely, or whether they only remain quiescent for a time, produce rather a marked immunity which affords a certain protection to the individual. We formerly taught that there was no immunity in tuberculosis. This we now know to be erroneous. There is a marked degree of immunity in tuberculosis, otherwise it would be impossible for any patient who has an advanced degree of tuberculosis to ever secure a healing. We know that every now and then many bacilli are thrown into the blood stream, which are destroyed by the immune bodies present, without even permitting a new focus to occur. We also know that patients who have open tuberculosis have millions and millions of bacilli in their

air passages without new infection occurring. We know that these same individuals swallow millions of bacilli without producing infection of the intestinal tract. The same number of bacilli put into the intestinal tract or air passages of a healthy individual would produce infection without doubt. In patients who have a tuberculous infection present, either healed, quiescent, or active, should a second inoculation take place, the bacilli will either be destroyed or a local ulceration will occur; or if the infection does spread it is apt to be modified by the presence of the original disease and result only in a chronic course. These early lesions that occur, then, are to be looked upon as producing a certain amount of resistance and in that way fortifying the patient against further infection. In spite of this, however, every now and then sufficient bacilli will find lodgment in the tissues, either escaping from the focus which had previously been quiescent or coming in from the outside, to produce new infection. In adult life we now believe that the infection that we find is almost invariably one secondary to a previous focus.

If it is found that the infection has extended to the lung in some 60 per cent. of autopsies on adults, how are we to decide whether this lesion is one of clinical tuberculosis or whether it is an old quiescent or healed one.

A most important factor in determining the presence of an active lesion is time and care in making the examination. Men who are busy in the practice of medicine are very apt to turn these early symptoms aside. The unfortunate thing is that none of them are distinctive. Take, for example, the early hoarseness and tickling in the throat. This is more apt to direct attention to the larynx than to the lung. The changes on the part of the appetite and digestion and loss of weight are more apt to turn attention to the digestive system than to the lung. A marked nervousness and lack of endurance is very apt to make the practitioner think that the patient is run down for some reason, tired out, or nervously exhausted; and so it is with all of these early symptoms. Unfortunately, they nearly all point away from the lung rather than toward it. When a patient consults his physician, complaining of being "run down" and is advised to take things a little easier, tuberculosis is rarely dreamed of. The slight cough and tickling in the throat is entirely overlooked, the digestive system improves with a little care and so, for the time being, the patient is sent away with false hopes, feeling that there is nothing serious the matter.

There is one point that I wish to emphasize and that is that whenever a patient presents himself for examination suffering from many slight symptoms, pointing to nothing definite, tuberculosis should be excluded before a diagnosis is made. We are taught that syphilis may simulate almost any nervous disease, and I want to say

that tuberculosis can produce symptoms pointing to a disease of the larynx, of the heart, digestive system, respiratory system, or nervous system, and it is our duty to be always on the lookout for this disease when slight symptoms on the part of these various organs are present.

The patient must be examined under favorable conditions. It should be unnecessary at this time to insist on examining the patient stripped; at the same time I recently saw a patient who was sent three thousand miles on an examination which was made through his clothing. While this patient had tuberculosis, yet the doctor who listened to him did not make it out by his examination. He guessed at it. Every patient who is going to be examined for tuberculosis should be stripped. It is very difficult for specialists who are examining chests constantly to discover early lesions by physical examination, and they always examine patients stripped. How can a man who has less experience expect to make the diagnosis under less favorable conditions? The room in which the patient is to be examined should be warm. The patient should also be examined sitting up instead of lying down. The reason for this is simple. When one stands the abdominal muscles are thrown into action in supporting the lower ribs. This fixes the lower ribs and changes the character of the breathing in the upper portion of the chest, making it more exaggerated than when the patient is lying down and the muscles are flaccid.

Another reason for having the patient in a sitting posture is that the examiner is able to assume a more advantageous position. It is very difficult to examine for minute changes in the respiratory note when in an uncomfortable position such as the examiner assumes when bending over a low bed.

While I recognize that bacilli are absent in the great majority of cases of early tuberculosis, yet a more careful search than we are often accustomed to make will greatly surprise us at times by showing the presence of bacilli where we little expected them. In order to facilitate the examination of sputum in these early cases it is well to collect all mucus that the patient raises for a period of several days. This should be allowed to stand in the incubator for twenty-four or thirty-six hours during which time a thorough digestion will occur as a result of the enzyme action. This then can be thoroughly shaken and a smear made or a loop may be taken from the sediment and examined in the usual way. An examination of this kind will often prove of inestimable value and show the presence of bacilli when the examination by simple means might prove negative.

I desire to emphasize the fact that much more information can be obtained on inspection and palpation in differentiating between early, active, and quiescent tuberculosis than is generally believed. When we look at the bare chest of a

patient suffering from early clinical tuberculosis we usually note a deficiency in the motion of the diaphragm on the side of the involvement. We also note a lagging of the apex. These conditions of lessened motion can often be detected better on palpation than inspection; but both methods will usually show them. In order to understand this condition of lagging it is well to bear in mind how it is produced. It is most probably a motor reflex caused by the inflammation in the lung, the afferent impulse being carried through the sympathetics which supply the inflamed lung tissue, to the cord, there causing an irritation in the cells from which reflex motor impulses are sent out through the nerves which supply certain peripheral muscles; in this case, the muscles covering the apex and the diaphragm. It is the same phenomenon as that which produces the reflex rigidity in abdominal lesions and the same one which produces the reflex which I have described as shown in all of the superficial neck and chest muscles in the presence of inflammation in the lung.

Not only do we notice the deficient motion by inspection, but we can also note certain conditions of the muscles and subcutaneous tissues. The same reflex which produces lagging produces increased tension on the part of the muscles of the neck and those covering the thorax, and trophic changes which are noticeable upon inspection and palpation.

Tuberculosis, being a chronic inflammation, after it has existed long, regional trophic disturbances occur in the muscles and subcutaneous tissue covering the lung; consequently if we notice on inspection that there is a wasting of the muscles and subcutaneous tissue covering one apex, we are at once led to believe that there has been at some time an inflammation in that lung, which has lasted for a sufficient length of time to produce these trophic disturbances. If, on the other hand, we notice that these muscles are firmer than normal and that they stand out more than they normally should, then we are led to believe that there is at this time an inflammation within that lung which is active and which is producing an active reflex contraction on the part of the muscles involved. If the disease be tuberculosis, atrophy alone indicates a quiescent or healed lesion; spasm indicates active disease, and atrophy and spasm indicate renewed activity in an old focus.

Thus, we have very important information as to the existence of present or past inflammatory processes in the lung, which can be determined by inspection and palpation of the muscles and subcutaneous tissue.

By palpation we confirm the findings on inspection. We note increased resistance to the touch of the muscles which are in spasm. We notice a doughy, inelastic, lifeless feeling of the muscles covering the apex and lung where there has been

an old chronic involvement. We notice a deficiency of the subcutaneous tissue also where this atrophy has taken place.

Percussion in early clinical tuberculosis gives us some information, but unless we study it carefully it may mislead us. It gives no information of value in differentiating between active and quiescent lesions. For example, an old healed lesion infecting a small area at the apex would produce sufficient change on percussion to be noted both by feel and by change in pitch; but this same chronic inflammation causes atrophy of the soft tissues over the apex which may more than compensate for the change produced by the thickening within the lung. The result is that often a normal apex covered by normal subcutaneous tissue and muscles will give a higher pitch note and more resistance to the finger than an apex which has been the seat of an old chronic inflammation. This must be considered in percussing over all pathological areas. Furthermore, the changes found by percussion, indicative of pathological change in the lung, do not mean that the disease is active. For example, Kroenig's narrowing of the apical isthmus, as determined by percussion, does not mean that active tuberculosis is in that apex, but it means that there has been a process there which produced certain changes in that apex, accompanied by contraction. To find out whether or not it is active we must employ other measures. Let us say here, by way of parenthesis, that often by looking at the neck of a patient posteriorly you can see a difference in the angle of the trapezius muscle which is suggestive of an old process in the apex and which is easier to determine than the narrowing of the isthmus as found by Kroenig's method. In a lung which has been the seat of an old chronic inflammation the angle between the shoulder and neck portions of the trapezius is usually lower than on the other side, and the body of the muscle itself is smaller than that of its fellow.

Before passing on I desire to emphasize the fact that no apex should be percussed without taking into consideration the condition of the soft tissues.

Auscultation gives valuable information for differentiating between active and quiescent or healed tuberculosis to the examiner who is thoroughly trained and who is constantly examining chests. It gives little or no information to one who is not carefully trained and who does not have this constant practice. In fact, it is apt to give him false data as a rule, which, if accepted, may prove disastrous. No man who is not expert at examining chests and who is not in constant practice has any right to give an opinion as to whether or not active tuberculosis is present upon percussion and auscultation findings previous to the time when râles are present. If the general examiner will pay more attention to clinical history and less to his physical examination he will

come nearer making a correct diagnosis. It is unnecessary to discuss the changes in the auscultatory and respiratory note, such as slightly roughened breathing, higher pitched note, prolongation of expiration, etc., because these are not practical to the majority of examiners.

In passing I desire to emphasize the fact, however, that no auscultation is complete unless the patient has been made to cough while the examiner listens. Many fine râles can be brought out after coughing which could not be heard on ordinary respiration.

The temperature curve is a very important thing in making a diagnosis of active or quiescent tuberculosis. I do not believe that every rise of temperature of a fraction of a degree which persists for a long time is necessarily due to tuberculosis. There are other sources of temperature which we do not know. I have often found certain patients of a nervous temperament in whom I could not make out a tuberculous condition by the most painstaking examination, but who had this constant rise of temperature. As a rule, it is irregular, not running to the same height every day, but varying considerably. I would like also to call attention to the fact that in women there is usually a premenstrual rise which begins anywhere from two weeks to a few days before the period time. The non-tuberculous woman often runs for the first two weeks of the month from $97\frac{1}{2}$ in the morning to $98\frac{1}{2}$ in the afternoon, and for the last two weeks, or a portion of this time, from 98 or 98.6 in the morning to 99 or a little above in the afternoon.

One characteristic of the temperature curve of active tuberculosis is that it goes in waves. It does not reach a maximum of 99 or 99 and one or two-tenths every day; but, if followed for a period of several weeks, one will find that there will be a number of successive days in which it will reach a maximum of 99 or 99 and one or two-tenths; then it will reach a maximum of only 98.6 or 99 for a few days, to return again after a few days to a maximum of 99 or 99 and one or two-tenths. This characteristic curve is to my mind most important in dealing with active tuberculosis.

It requires considerable care in constructing a temperature curve which is of any value for the determination of the presence or absence of active tuberculosis. In the first place, the temperature must be taken at frequent and stated intervals. At least four records should be made daily. The early morning temperature when the patient first awakens; the 12:00, 4:00 p. m. and 8:00 p. m. are most convenient. These, however, may miss the highest point because in some cases it will come at 2:00, in others it will come at 6:00, so it is well to have a two hourly chart kept, at least for a number of days until you have found the highest point for that patient. The thermometer should be held in the mouth for a sufficient length of time to allow full registration, not less than five

minutes for the patient who is in the house and not less than ten minutes for the patient who has been out in the cold. Temperature taken once daily in a physician's office is worse than useless because it gives false information. It may show a rise because of the nervousness of the patient, or it may show no rise because taken at a time of day when the patient does not show an elevation, though present. When a temperature record is to be taken, as I have mentioned, it must be kept up for a number of days to be of any value; and, if it shows the curve which I have described and if clinical symptoms are present, with or without physical signs being found on physical examination, it should be considered as pointing toward a probable tuberculous lesion.

The Roentgen ray is of no value whatever in differentiating between active and quiescent or healed tuberculosis. It will show certain shadows that may be suggestive; but, beyond that, it shows nothing. It is important in the localization of areas near the hilus; but we must judge whether the disease is active or not by confirmatory data found through other methods of examination.

The fluoroscope is of some value in differentiating between active and quiescent lesions because it affords an opportunity to observe the motion of the diaphragm, and, as mentioned above, it is interfered with in many cases of active tuberculosis.

The next question for discussion is the tuberculin test. The tuberculin test as usually made, where nothing is noted except whether or not a reaction occurs, is of no value whatever in differentiating between active, healed and quiescent tuberculosis; but my experience would lead me to believe that if these tests are carefully made and observed they will show a difference in the character of the reaction in the presence of active, quiescent and healed lesions.

The tuberculin reaction is an immunity reaction. It is a result of the combination between the tuberculin and the antibodies present in the body. These antibodies are found in great numbers when the organism is fighting an active infection. They are not found at all when the organism is free from infection, and should be found only in small numbers if the organism is only now and then called upon to ward off a few organisms; consequently we have a theoretical basis for there being a difference in the character of the reaction according to the activity of the disease. The reaction continues to increase in intensity until all the tuberculin is saturated. We would expect this to occur quickly, if there were many antibodies present, and slowly if there were few antibodies present; consequently when active tuberculosis is present and many antibodies are found in the body fluids we would expect that there would be an early saturation of the tuberculin and consequently an early maximum reaction. On the other hand, if the disease is quiescent, or nearly

so, we would expect there to be only a few antibodies present, and consequently a delayed saturation of the tuberculin with a delayed maximum reaction. According to my tabulated statistics I find this to be true. I find that in seventy-seven patients in whom I made a careful physical examination and compared my findings with the results of the tuberculin test that those patients whom I classified as suffering from active tuberculosis showed a maximum reaction to tuberculin within the first thirty-six hours in 80 per cent. of the cases. If others can confirm this it may prove of considerable value in differentiating between active and quiescent lesions.

It is necessary to observe these reactions carefully if we are to place any reliance upon them. I give my patients a card and have them draw an outline of the reaction at intervals of sixteen, twenty-four, thirty-six and forty-eight hours after the test has been given, unless I have an opportunity to see the patient myself. This enables me to obtain a fairly accurate record of the reaction.

I use Koch's old tuberculin full strength for making the test. I put a drop on the arm and bore through it with the von Pirquet scarifier. The tuberculin is allowed to remain on the surface for at least five minutes. It is then mopped off carefully and the patient is instructed not to rub the arm.

It is important to use a greater amount of tuberculin than is sufficient to satisfy the antibodies present *in situ*, otherwise the maximum will always be attained early.

In summing up the methods of differentiating between active and quiescent or healed tuberculosis, I would suggest:

First, that the most important information, particularly for the general practitioner, is derived from the taking of a careful clinical history including the temperature curve.

Second, this should be supplemented by a thorough inspection and palpation of the muscles and soft tissues; particularly noting lagging of the chest wall.

Third, this should be further supplemented by percussion and auscultation by those who have had sufficient experience to derive data that is of value from these measures.

Fourth, where the fluoroscope can be used it should be employed in studying the motion of the diaphragm.

Fifth, the tuberculin test should be used in the manner that I have mentioned, noting the time of the maximum reaction.

Sixth, even though the patient should deny the presence of sputum the examiner should insist on his collecting any mucus that is raised over a period of several days and after allowing it to ferment, examine it carefully for tubercle bacilli.

The data derived from these various methods will, when properly put together, give us rational

grounds for a diagnosis of the presence or absence of active tuberculosis in nearly all instances.

I have been asked to say a few words regarding the use of tuberculin in the treatment of tuberculosis. My idea of tuberculin treatment differs somewhat from that usually held. It is not right to speak of the tuberculin treatment of tuberculosis. Tuberculin alone is no treatment for tuberculosis. I consider the scientific treatment of tuberculosis a combination of tuberculin with all measures which will build up the patient and make his resisting power greater. The injecting of tuberculin alone, without proper care and supervision of the patient is unscientific and nothing short of malpractice.

Tuberculin is a specific remedy. Its action in tuberculosis is specific in that it stimulates the body cells to the production of certain definite antibodies whose function it is to attack and destroy tubercle bacilli and their toxins with which they come in contact. This is the only form of treatment that is specific. Fresh air, good food, proper regulation of life and the alleviation of distressing symptoms and complications are not specific, yet they are a very important part in the treatment of tuberculosis. They make the patient stronger; build up his resisting power; increase his reactivity and make his body cells capable of reacting to the tuberculin when it is injected or when it is produced normally. That an increase in the number of antibodies is an important factor in the treatment of tuberculosis should be evident to all. Tuberculosis is a disease which has a tendency to spread. The bacilli escape every now and then from the focus of infection and are carried through the blood and lymph streams to other parts. If these body fluids are rich in antibodies, they are more apt to be destroyed and a spread of the disease prevented. Tuberculin also acts in stimulating healing. It increases fibrosis and aids in the production of scar tissue and encapsulation.

While of inestimable value when properly given, it is of little or no value and may even do harm when given improperly. Too much must not be expected from tuberculin as a remedy. If it stimulates the body cells to the production of antibodies and increases fibrosis it is performing its function. It may fail to cure the disease and yet perform its function perfectly. Many men who use tuberculin fail to grasp what it should do. The result is that they are often disappointed. It cannot prevent necrosis when begun; it cannot fill up cavities; neither can it restore lost function to the various organs; but, if given properly, it will increase the antibodies in the blood, and will stimulate an increase of scar tissue formation and thus improve the patient's chances of cure; but it should always be reinforced with other measures which will help the patient.

A word regarding climate. There is no specific climate for the treatment of tuberculosis. Patients can get well in any climate. To be sure,

they can get well easier and quicker in some climates than others. In some more favored localities they can remain out of doors easier; they are not exposed to so much danger of infection and their general resisting power receives greater stimulation; but the essentials in the treatment of tuberculosis are an intelligent physician who understands the disease and an intelligent patient who is willing to cooperate. These can be had in any climate and can overcome many of the disadvantages of even the worst climate.

DISCUSSION

Dr. A. E. TAUSSIG: It is certainly a pleasure to have Dr. Pottenger speak to us to-night out of his large experience, and those of us who were able to see him demonstrate his methods on the patient this morning were doubly privileged.

There can be no question, I think, as to the value and correctness of his observations, especially in regard to those reflexes of diagnostic importance which he has touched upon to-night. I may say that he has merely touched upon them. His observations and studies are far more extensive and go far deeper than any one who heard him only to-night might infer.

While admitting the great value of his observations, it must be remembered that repeating them is not an easy matter. It is simple enough to hear these various reflexes described, to be told how one can recognize an early tuberculosis by palpation of the muscles, how one can recognize a cavity by the sense of touch, or an area of consolidation, or a thickened pleura. When, however, one goes out and tries to do these things for one's self, one meets a good many obstacles. Ever since Dr. Pottenger's first work on this work was published I have been making use of his methods in my own work, and while I have sometimes felt much encouraged about their practical utility, I have not infrequently felt the reverse, it is easy enough to recognize these muscle spasms and degenerations when they are outspoken. Again, after you have made your diagnosis by other methods of physical diagnosis, you can very frequently confirm them by recognizing these changes. It is altogether a different matter in a case in which these signs are not clearly marked to rely upon them for diagnostic purposes.

I was much interested in what the doctor said about the von Pirquet test in distinguishing latent from active forms of tuberculosis. A good deal of work has been done along this line, and while Dr. Pottenger may be entirely right in his interpretation of the rapidity with which the cutaneous test attains its maximum, I am sure that the original method of interpreting this reaction, that is, considering the degree of activity to be in some way related to the degree of reaction, is by no means true. If one does the von Pirquet test upon a considerable number of perfectly healthy adults, who have no physical signs of tuberculosis, give no history suggestive of tuberculosis, you will find in these patients all possible degrees of positive reactions.

I was much interested also in Dr. Pottenger's method of using tuberculin therapeutically. It differs in detail, but not in its general principle from the German method. In so far as the latter permitted me to get reaction, still something remains to be said for the other method in which the injections are given at longer intervals according to the dose, and in which the dosage is increased slowly, say from 25 per cent. to 50 per cent. each time. I think the other dosage is perhaps to be preferred, especially in ambulatory cases where you cannot see the patient as often as you would like, and I must say if this is care-

fully given, you can get a reaction pretty well and you do see your results. This method unquestionably enables one rapidly to produce a high degree of tuberculin immunity, but this unfortunately is not at all identical with immunity to tuberculosis. Certainly in ambulatory work it is safer to increase the dose slowly and to give less frequent injections.

In giving tuberculin in pulmonary tuberculosis, it is extremely difficult to interpret your results. The patient comes to you, often having taken poor care of himself. You put him in better hygienic surroundings, watch, help and encourage him and give him tuberculin. If he gets better, it is impossible to satisfy yourself as to the part played by the tuberculin in producing this result. Sometimes if you have a run of successful cases you will feel much encouraged as to the value of tuberculin; and vice versa. In my own experience the most striking examples of the value of tuberculin have been cases of tuberculosis involving the eye. The patients are under practically the same conditions before and during its use, and I am assured by the oculist that he does not expect rapid amelioration of the condition from the local treatment alone. Nevertheless, such patients do very well under tuberculin treatment with a slow and cautious increase of dosage.

DR. O. H. BROWN: I think it is wrong to bring a paper like this to such a climax. I have some hesitancy in attempting to discuss a paper so ably presented. I wish to compliment Dr. Pottenger on presenting to us not only something new, but something old as well. We need to hear the old as well as the new. I wondered if Dr. Pottenger would define the quiescent lesion. He got around this by saying that an active lesion was clinical tuberculosis, and hence a condition demanding our attention. We can divide from the standpoint of diagnosis into four classes: (1) that plain case which even a layman may diagnose; (2) that also plain case to the man who sees a large number of cases, but yet to the man who does not see a large number, it is not so plain. And there we need to emphasize, as Dr. Pottenger has said, the clinical history, the physical findings and all the refinements thereof. In that history we should observe the temperature, the cough, etc., and when he has been having them, his colds and illness, particularly his colds, whether these have been going on for a week or three weeks or more, whether the last one was as severe as the former, etc. I have found the history of frequent colds a very common thing in many cases. The history of the repeated colds that hang on for several weeks and then finally clear up point to a tuberculosis of the lungs; (3) the so-called incipient cases, in which there is some complication which makes the diagnosis difficult; here we must make use of all the aids possible to be sure that there is an involvement of the lungs. And it is with this class of cases that Dr. Pottenger's remarks have special bearing; (4) the class of cases that are not clinically tuberculosis. The individual has some of the signs of tuberculosis, such as loss of weight, malaise, anemic appearance, etc., but does not consult a doctor for his or her chronic condition. This is the class of cases in which, perhaps, we can do as much as in any other if we can only get hold of them. And it is our duty, whenever possible, to suggest to these people that they are fit subjects for tuberculosis and should submit themselves for treatment. This brings us back to the predisposing causes of tuberculosis, and it is our duty to recognize those and correct them where possible. I lay particular stress on worry, over-work, working on a tension, loss of weight, previous disease, etc. On the attention to these factors and the people affected by them—especially the children—lies the hope of the future concerning tuberculosis. I conclude by saying that an active case of tuberculosis in contradistinction to one which has a quiescent lesion, is one

which is having manifestations of the disease. The manifestation may be less at one period than another, and are usually greatest following over-work, worry, colds, etc. If the afternoon fever and the cough come regularly following these periods of stress and strain, the case is very likely one of tuberculosis.

THE RELATION OF THE PHYSICIAN TO THE CORONER'S OFFICE*

LOUIS R. PADBERG, M.D.

ST. LOUIS

When your program committee suggested to me sometime ago, that I read a paper before the society, I felt delighted to have such an opportunity, for I felt it was quite opportune to bring the coroner's office into closer relation with the physician.

During the career of every physician there comes a time when it becomes necessary for him to have dealings with the coroner's office and it is along these lines that I wish to speak to you this evening.

Fifteen months have now elapsed since it was my good fortune to have been elected coroner of the city of St. Louis. I said it was my good fortune, for the simple reason that I have never gone into any line of work which to me was more interesting, more diversifying and less laborious. To one who has not studied the details of the workings of the coroner's office, it presents many phases which are rarely thought of.

In this office the exercise of judgment is of paramount importance, and this judgment must often be rendered very quickly, as each individual case is a law unto itself. Without the cooperation of one's entire staff, from deputy down to janitor it is practically impossible to produce satisfactory results. With the assistance of the board of public improvements I was enabled shortly after my induction into office, to transfer the coroner's office from the basement of the City Hall into larger and more commodious quarters, well fitted up in the southwest corner of the Municipal Courts Building. The quarters now consist of the clerk and deputies' room, two rooms for stenographers, a private room, a jury room, witness room and court or inquest room.

As in every establishment or undertaking, the necessity of closely affiliated offices, working harmoniously with one another is something to be reckoned with. The combined forces of the entire police department and the circuit attorney's office lend an immense aid to the work of the coroner. I must not forget the board of health, for it is to them also we look for aid.

Up to now I have been dealing with generalities and have not taken up any particular subject in concrete form. The actual date of the origin of the office of coroner is not known. It is stated

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by some authorities to have existed at the time of King Alfred, 871. At all events, the office so named from corona, for the coroner is an office of the crown who kept some of the pleas of the crown, was founded in England and still exists in all parts of the British Empire as well as in the United States. The primary object of the coroner's office in England appears to have been to keep watch over the profits of the crown, to inquire concerning transactions, wreck, whale and sturgeon and to secure them for the king's use. His later functions—namely, to conduct an inquest in cases of sudden death, had a similar purpose—to see that the crown was not deprived of its emoluments arising from the forfeiture of the chattels of felons and outlaws.

Originally it was the concern of the coroner to bring the goods of the felon to the king for his use rather than to bring the felon himself to justice. Anciently it was also the duty of the coroner to take the confession and abjuration of felons. He also held inquests on arson and housebreaking. While the office was practically created for but one purpose, namely, the safeguarding of the property of the crown, through the march of ages, this purpose has been slowly minimized and we now see another function almost completely usurping it, i. e., the investigation and determination of the cause of death of individuals dying by their own hand, by some one else's hand, by official execution or through the multitudinous channels designated "accident."

So, now, what cases come under the coroner's jurisdiction? The coroner deals with all cases of persons who die within the limits of the city of St. Louis, from sudden or unnatural death. As far as my memory goes, no written rule has ever been promulgated among physicians as to what really constitutes a coroner's case. However, natural instinct tells us where a person has not died in the ordinary way, that something out of the ordinary must be done. Consequently, it is the duty of every physician when called to the case of unnatural death to refuse to issue the certificate and notify the coroner.

How then can we classify unnatural deaths? We can make 4 large classifications: (1) Accidents; (2) suicides; (3) homicides; (4) people found dead, or in a dying condition.

Under the head of accidents can come railroad and automobile accidents, falls of various kinds, possible poisons, tetanus cases, hydrophobia (dog bites), injury of any kind or death under anesthesia.

(2) Suicide whether by poison, gunshot, stab wound, etc., or self-induced death in any other manner.

(3) Homicides. Under this category are included all murder cases of whatever nature and abortions.

(4) All people found dead without previous medical attention or practically in a dying condition.

There is a great responsibility resting on a physician when he issues a death certificate, for it is almost as if it were a passport from this mundane sphere to the land from which no traveler returns. When the doctor issues a certificate of this kind it is presumed that the patient in question has died a legal death and shall no longer be interfered with. You realize from this that when you sign the certificate you honestly and conscientiously feel that the patient in question has died from natural causes and that no legal entanglements, as suits after accidental death in any shape or form, will be called into play. To be more specific, let me cite that some time ago a woman died and the doctor issued a burial certificate, and a few months later a law suit was instituted against some accident insurance company and the plaintiff stated that his client had died of an accident. The doctor who issued the certificate gave the cause of death as a natural one, and how the plaintiff could hope to obtain a favorable verdict in a case of this kind is hard to understand.

Several cases came under my observation lately where the patient died secondary to an injury, but in which the doctor in attendance issued a certificate, and if these had not been halted and investigated, grave injustice would have been done to some one.

Each and every one of us has received or can receive a copy of the bulletin published by the Bureau of Vital Statistics, which gives us the nomenclature to be followed in signing a death certificate, giving the cause of death and contributory cause. It is not my purpose to dwell on this, as the signing of death certificates from natural causes is out of my realm. Getting down to the root of the matter, the facts which every physician must ask himself are whether a patient has died a natural death or an unnatural one. If the patient died in a natural way there is nothing more to it than sign up the cause of death. If there is a probability or possibility that this was not the case, the physician must halt then and there.

In other words, he must remember if the patient has met with an accident, or if he died, say, six, eight or ten weeks later from an intervening cause, as pneumonia or nephritis, it is incumbent on him to make that a coroner's case. The same rule which I have given for accident cases holds good for murder cases, shooting or stabbing cases, etc., should death occur some time later.

All abortions, whether self induced or caused by another or accidental, become coroner's cases. Cases of puerperal infection resulting in the death of the mother become coroner's cases if the child was not born at full term or alive.

Again, gentlemen, if you are called to a case and the patient is dead, or you have not had sufficient time to make a diagnosis, it is your duty to refuse to issue a certificate and notify the coroner's office. Also, I might add when you are in doubt about a case, call up the office and get the required information, and in the meantime advise the family to tell the undertaker not to embalm the body until the desired information has been secured.

Some time ago I issued a circular letter to all the undertakers of St. Louis requesting them to inquire from the physicians whether or not certain cases were coroner's cases, and not to embalm them until they had been given permission to do so. At the same time I issued a letter to the superintendents of the various hospitals of St. Louis not to permit coroner's cases to be moved from the institution, until permission had been given. The City Hospital refers many of their cases to us, and in fact their system or method with our office has been of such a nature that it would be well for the other hospitals to follow their example. If the various hospitals would give us a detailed history of their various coroner's cases it would be saving them a great deal of annoyance and help to bring about satisfactory results.

Now how do we handle our cases? Irrespective as to how we obtain first information in any case, we make a notation of the name of the deceased and the address, and then request a report of the case from the police department. After getting this we set a time for the inquest. In the meantime, what disposition is made of the body? That again depends on the circumstances. It has been the policy of the office to accommodate the public as much as possible without interfering with a thorough investigation of the individual case. Bodies of the deceased are either left at their homes or are taken to the establishments of the undertaker which the family selects, or are sent to the morgue or city mortuary. If a man drops dead on the street anywhere, whether he be known or not, it is a rule to take the body to the morgue, unless special permission be given by the coroner to do otherwise. The police have a standing order to that effect. The object of this is to prevent any irregularities that might develop; for instance, the collusion between a certain policeman and certain undertakers. On the other hand, if the person dies in his own home, permission is given by the coroner either to keep the body at the residence, or if in the opinion of the coroner a post-mortem is necessary, the body is taken to the undertaking establishment designated by the family. And should any body be removed from the morgue, a written order from the nearest relative must be presented to the coroner's office.

All bodies brought into the morgue are searched by the police accompanying the body to

the morgue, in the presence of the superintendent of that establishment, and whatever valuables are found are taken by the police to their headquarters and later on sent to the coroner's office, for which the police get a receipt. The various employees of the morgue and the coroner's office are bonded officers. The money and valuables received in this way are turned over to the family as soon as is practical. All the unclaimed money and valuable are held for a period of sixty days and then turned over to the city treasurer. The amount of money turned over to the city treasurer in this manner will average about ten dollars a month. Unidentified bodies brought to the morgue are placed on exhibition for seventy-two hours, after which they are sent to Potter's Field.

Now, how do we conduct our inquests? A jury of six men is impanelled by the coroner's constable, who serve one week and receive one dollar per day. This jury, in conjunction with the coroner's deputy, views the body either at the home, the undertaker's or at the morgue. No bodies are brought into the coroner's inquest room. The witnesses to the case having been summoned by the police are then questioned individually as to what knowledge they have concerning the case in question.

At the last session of the legislature a law was passed obliging the circuit attorney to have a representative at all coroner's inquests where questions of felony might arise. The object of this is to give the circuit attorney a better insight into these cases, from testimony of various witnesses while it is fresh in their minds, enabling him to handle the cases more expeditiously.

The number of inquests conducted every year averages about 1,800. Approximately 30 per cent. of these cases are posted. This brings me to another subject, and that is, What cases are posted? First of all, it is reasonable to suppose that, as a rule, unless a man has been under the care of a physician or has met with an accident, there must be some clear reason why a person between the ages of 10 and 50 years, should die a sudden death. After a man has reached three score and ten, it is natural to suppose that, in the majority of cases, his days are numbered. So now, unless there are extenuating circumstances, all bodies between the ages of 10 and 50 are posted. All murder cases are posted. And I might add here that great care must be taken in posting cases of this kind, for instance, as to the direction of the bullet or the stab wound, powder burns and as to the cause of death. Questions of law come into play frequently, the position of the murderer and the murdered playing an important rôle.

Many an attempt has been made to avoid a post-mortem, only too often to cover up a suicide. Outside the natural antipathy which people have against suicide, the insurance companies are very

much interested in these cases, some fraternal organizations being protected by a suicide clause. The Lucas case which was handled in St. Louis County a short time ago will entail an interesting legal battle on the suicidal proposition, as some of the insurance companies double their indemnity on a common carrier and in this case the amounts involved were quite large. One of my post-mortem physicians was called in as an expert to determine whether or not this was suicidal or accidental.

In the short space of time that has elapsed since I have taken charge of this office I could cite any number of cases where I was almost begged to avoid a post-mortem, where either the family or the undertaker stated positively that there was no suicide, that the man died from some form of heart disease. I can now recall 4 cases where after posting, we found carbolic acid poisoning to have been the cause of death in just cases of this kind.

Speaking of poisons recalls to my mind another phase of the work we are doing. A tabulated report, covering the past eight years, of poison cases coming to the coroner's office, shows that 1,127 people died from the effects of poison taken with suicidal intent; 252 people died from the effects of poison taken accidentally; 65 died in which open verdicts were rendered (where it could not be determined whether the poison was administered accidentally or with suicidal intent); 10 homicides and 1 case of criminal carelessness. This does not take into account the poison cases which have recovered of which we have no record.

Since the year 1905, we have had 907 cases of carbolic acid poisoning to deal with. Why is carbolic acid the favorite means of committing suicide? First, because of its certain effects, and secondly, the ease with which it can be purchased or obtained. Only a very small number of carbolic acid cases come for treatment, and those who receive it, receive it too late, or the poison has been taken in such quantities that the treatment is of no avail.

Deaths from poisons in the past ten years have increased alarmingly, the number of carbolic acid poison suicides having increased from 65 in 1905 to 120 in the past year. You can see from this that the number of carbolic acid suicides alone has doubled in the past eight years, whereas our population has only increased approximately 10 per cent. The number of bichloride poison cases has increased surprisingly since the death of the Georgia banker, upwards of 20 cases having been treated at the City Hospital, besides those at other institutions. The poison question is one which will have to be dealt with in the near future. The ease with which poisons can be obtained, being usually bought under the pretense of wanting them as an antiseptic or disinfectant, proves to us that something urgent must be done. Some-

time ago, Dr. R. L. Thompson, autopsy physician to the coroner, while traveling in Berlin had an interview with Dr. Pick, a world renowned pathologist and a man of endless experience. When asked by Dr. Thompson to permit him to see a case of carbolic acid poisoning, he answered, why you surprise me, I have not only never seen a case but I have never heard of one in this vicinity. Reports from the Pathological Institute of Vienna, one of the world's famed medical centers, corroborate the above statement, as do also the latest publications from France and England.

Here in St. Louis we have 120 cases of carbolic acid suicides per year or more than 2 a week. Some remedy must be found for this condition. If the sale of poisons can be restricted elsewhere, whether in this country or Europe, and if the number of poison cases is greater here than in European cities, let us get busy and find the reason. If our present laws are not sufficiently stringent, let us get together and work out some means which can relieve the situation. Then again, anyone who has given this subject of poisons any attention will agree with me that suggestion plays a big part in the suicidal rôle. Experience in the coroner's office shows that whenever the details of a poison case are published in the daily papers, not only one but several cases of a similar nature will present themselves in a few days. If the concerted action of the various newspapers could be obtained to refuse to publish the details of a suicide, the manner and means employed, there is no doubt in my mind that a beneficial result would ensue.

I have just lately been informed that cyanide of potassium, one of our deadliest poisons, is used in some restaurants for cleaning the silverware. In my opinion there is danger lurking in this method and it should be stopped.

A line of work which has received considerable attention from our office is that dealing with abortions. I am anxiously awaiting the outcome of various cases of this kind which we have handled in the past year. Up to the present time there are 5 cases pending in the courts, cases in which we have held certain individuals for performing illegal operations. It is extremely difficult to get a clear and concise case of this kind for various reasons: First, because the coroner's office cannot take any ante-mortem statement from any individual since it does not become a coroner's case until the individual has succumbed as the result of an operation of this kind. Secondly, the proper authorities, the board of health and circuit attorney, are not sufficiently often notified by the physicians who are taking care of the case, which would enable the circuit attorney to get a statement from the individual. Thirdly, the husband frequently will not tell all he knows about the case or professes ignorance of its details.

I am very much interested in a case we handled some few weeks ago, in which a statement was

made to the circuit attorney by the woman who since died from the effects of the operation in which she incriminated a certain midwife. Repeated questions by the circuit attorney failed to get any definite answer from the woman in question. She was asked, "Do you realize that you are in a very serious condition and that you are going to die?" She would invariably answer, "I am a very sick woman but I hope to get well." It will be interesting to note whether the court will construe this in the light of an ante-mortem statement.

Our newspapers told us a few weeks ago that the homicides in St. Louis were greater here for the population than in any of the large cities. Of course as far as the number of these is concerned the coroner's office has no control. All we can do is to render a verdict in accordance with the testimony given.

Post-mortem work from the coroner's standpoint is vastly different from that which we find at our general hospitals in so far that our cases are all sudden deaths, whereas those at the various hospitals occur after a lingering illness and the pathological changes coincident with disease are very well marked. The post-mortem work in our office is at times greatly hampered by undertakers embalming bodies before permission has been given them to do so. This can be explained on various grounds. First, the innate desire of the undertakers to embalm bodies as soon as possible. Secondly, laxity to inquire whether a particular case is one for the coroner. Only to-day I was called up by an undertaker who reported a certain case, stating that an individual had died following an injury received three weeks ago. Injuries as far as he knew had been received by falling from a street car. The doctor in attendance ascribed the cause of death to uremia and told the undertaker he would sign the certificate if the coroner would give permission. In this case, both physician and undertaker were at fault, the physician for not reporting the case to the coroner and the undertaker for not making the proper inquiries before embalming. A law-suit will undoubtedly follow this case and the necessity of a post-mortem is evident. This body had been embalmed when I was notified and you can readily understand the difficulties which are presented to the man who is to make the autopsy in a case of this kind. A short time ago a poison case had been embalmed and here you can see some of the difficulties encountered in embalmed cases.

Many people are under the impression that the coroner's office gives the news to the newspapers and ask us to suppress it. To this I must answer we do and we do not. All our records are public property and are open for inspection to all. The reporters, ever on the alert, watch the various sources from which we obtain news and at times know all about a case before we are notified. It

is practically impossible for us to keep anything out of the papers.

The coroner's office is a prolific source of news for the papers and we average 8 to 10 reporters a day. One hardly leaves when another enters. Our office is no different in this respect from any of the other courts.

We have had an unusual number of interesting cases the past year, some of which you will remember when I recall them. For instance, the Mrs. Neff and McWilliams case, where in some manner or other arsenic was dumped in the food. Then there was the case of the old maid and her aunt, who had been buried in the cellar down on South Broadway. One of these bodies had been hermetically sealed in a show case for one year and had been kept in excellent condition of preservation. Another case was that of a woman who took a teaspoonful of oil-of-cedar which caused her death. This was taken with the intention of bringing on the menstrual flow. Still another case was that of a man who was to be married, and feeling that he had contracted syphilis some years previous, hesitated to enter the conjugal state and received an injection of neo-salvarsan and died 6 or 8 hours after of acute arsenical poisoning. Two cases of ruptured extra-uterine pregnancy came to our attention within one week. One case of caisson disease or bends from the Famous-Barr Bldg.

In conclusion I wish to say there are a few recommendations which I have to make and which I hope I will be able to put into effect before my term expires. First, our morgue has outlived its natural existence. The jail will soon be moved to new and larger quarters. It will be incumbent upon the city to build a new morgue, as it occupies a corner of a block which will eventually be disposed of by the city. The morgue has recently been renovated interiorly and now presents a fairly good appearance. However, like everything else that is old, it is extremely difficult to make it absolutely satisfactory.

Then again, I would like to see a law passed compelling physicians, under penalty, to notify the coroner of cases coming to their attention, furthermore, restricting undertakers from embalming bodies without permission of the coroner; also prohibiting the use of arsenic and strychnine in embalming fluids, thereby rendering chemical analysis useless; penalty for removing or disturbing a dead body without the permission of the coroner, and also a more stringent poison law.

These few remarks will give you at least a hazy idea of the work that is being done at the Coroner's office at the present time. While we are not working under ideal conditions, still from a practical standpoint, I feel they are fairly satisfactory.

3614 California Avenue.

INTRODUCTION TO LABORATORY SYMPOSIUM*

CHARLES H. NEILSON, M.D.
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The science and practice of medicine is closely linked with the laboratory and laboratory methods. This connection is logical because the development of medicine in all its phases is due to laboratory methods; in fact, the diagnosis of disease in its entirety is along laboratory lines. Observation and interpretation of signs are fundamental in laboratory investigation. A physical examination is observation and interpretation of signs and therefore laboratory in character.

A great many physicians, when they think of a laboratory, have a mental picture of a space within four walls where an enthusiast with no sense of the practical manipulates his test-tubes and apparatus. Was the work of Beaumont on Alexis St. Martin lacking in a practical application? Did not Laennec, who introduced the stethoscope, discover something of use? Was Pasteur's work on bacteria, or Jenner's work on vaccination, worthless? Were the great labors of Virchow of no consequence? Is Emil Fischer, a worker in pure chemistry, to be forgotten by the physician who is always talking of the practical side of medicine?—Fischer, who gave us the chemistry of uric acid and the caffeine group, who has shown us the chemistry of sugars and their metabolism, Fischer, who to-day is synthesizing the complex protein from simple substances, which fact may explain many metabolic disturbances and pathologic changes. Do we owe nothing to Wassermann, Noguchi, Councilman, Flexner, Meltzer, Ehrlich, Hektoen, Rosenau, Jaques Loeb, Stewart, and a host of others? Is there nothing practical in their work? Why do such clinicians as Billings, Herrick, Barker, Thayer, Christian, and many others go to Europe and study biochemistry and pathologic chemistry? Is it not that the fundamental processes underlying disease may be better interpreted?

The broad, thoroughly trained man is a safer man than the untrained. But you say, "see the good doctors who do not know the laboratory side of medicine." Granted—but with the knowledge from the laboratory, a good man with the same energy might be a great man. A brilliant man by nature with a little training is less safe than a mediocre man with thorough training.

What is a clinician? The term means a physician who diagnoses and treats disease. To some men the man who looks at the tongue, feels the pulse, asks about the bowels and writes a prescription is a clinician. This is the man who, if history be correct, treated three cases of throat trouble in a family and lost two of the cases with a diagnosis of malignant sore throat, when a little knowledge of bacteriologic methods would

have enabled him to make a diagnosis of diphtheria. Is the man who knows only the pharmacological action of drugs and their therapeutic use a clinician? No, he is a therapist. Is the man who knows only physical diagnosis a clinician? No, he is not a clinician, but a physical diagnostician. Is the man who knows only laboratory methods and their application a clinician? No, he is a laboratory man. A clinician is a combination of all three. Such a combination makes the safe physician and good diagnostician. Such a man will not sneer at the therapist, the physical diagnostician nor at the laboratory man. He is the man who will welcome anything new, who will try out the new, rejecting the bad, absorbing the good, in order to make himself fit for his profession. Such a clinician will not take out the spleen of a myelogenous leukemia case for a hypernephroma. Such a man will have fewer diagnoses of hysteria, neurasthenia and auto-intoxication than the man who does not obtain all the facts in the case. Such a man will, of course, make mistakes, but fewer mistakes than the man who is one-sided.

The laboratory man is not against the clinician, but the laboratory man often speaks sneeringly of the clinician's methods and technic and says, "Oh, that is exact enough for a clinician." To some extent the criticism is just, as many clinical methods do not need to be as exact as in the purely technical and theoretical laboratory investigations. In spite of this criticism many valuable and exact pieces of research work have been turned out by clinicians. This antagonism is further accentuated by the belief of many clinicians that the laboratory man can diagnose disease purely by laboratory means. Some laboratory men may make this claim, but a fair, broad-minded man knows better. Laboratory findings are only aids to diagnosis, but they are valuable aids, just as are a good history and a complete physical examination. If we take all the facts into question, as deduced by these various methods of diagnosis, in most cases we will arrive at a correct diagnosis. An attorney must view his case from all angles. This is none the less so in diagnosing disease.

When an automobile suddenly stops there can be only three or four things out of order, and yet how often the expert must study to find the trouble, or seemingly must study to find it. When we come to study a diseased human body many are the facts we must take into consideration. I once heard Dr. E. P. Lyon say, "The more I see of automobiles and the difficulties of making them go, the more I respect the doctor." Gentlemen, we, as doctors, need all the light we can get on our cases and even then we are frequently at a loss. A noted physician emphasized this fact when, as he lay dying and they asked him what physician they should get, he said, "Oh, get the near-

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est." If we stop to consider, there are but few diseases that can actually be diagnosed by the microscope and other laboratory findings. No man can diagnose the leukemias without a microscope. Without this aid his diagnosis will be only conjecture. This is also the case in pulmonary tuberculosis. Diphtheria can be diagnosed with certainty only by the microscope, etc. But the laboratory findings in a great many cases are only presumptive or circumstantial evidence. Negative findings are frequently as valuable as positive findings. Because a laboratory man often does not find what we, as clinicians, expect does not vitiate the results of such work. It speaks more strongly in its favor.

Diagnosis is a question only of interpretation and judgment. A correct interpretation of the history, physical findings and laboratory findings will lead to the diagnosis. In laboratory work the question of interpretation of results coupled with the other facts is of utmost importance. Give two men the laboratory findings in a case, one may interpret them incorrectly and thereafter discard all laboratory work, while the other interprets correctly and arrives at a correct diagnosis and thus becomes a believer in laboratory work. For example, lobar pneumonia nearly always has a high leukocyte count, but some cases whose resistance is low or for some unknown reason, have a normal or sub-normal count. In a well established case of typhoid fever a leukopenia is the rule, but a leukocytosis may develop or the count remain normal or above. This does not rule out typhoid when interpreted correctly. The man who does not know laboratory work and its possibilities and limitations may be led astray. If diagnosis could be carried on by a rule of three, or if all cases of any disease were exactly similar, diagnosis would be easy; but, unfortunately for us, each case is practically a law unto itself.

Many of our cases in the practice of medicine are problems to be solved; as much so as the problems any of our research brothers can undertake, and they are problems often with a human life at stake. Let us then use all the facts of modern medicine to solve these problems. We cannot all be laboratory experts, nor do we need to be, but we can know enough to enable us to understand the other man's findings and enable us to interpret correctly.

In conclusion, I feel as Dr. Bevan, who said, "Laboratory men are not against the clinician, but would have the clinician made after a new pattern, thoroughly learned in laboratory methods so that he may understand and interpret properly the utilization of physiologic, pathologic, bacteriologic and biochemical methods for diagnosis and for therapy."

Grand and Caroline Streets

STOMACH AND FECES *

H. W. SOPER, M.D.

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It is difficult to separate the analysis of the stomach contents and feces from the history and physical examination of a given case. Only in very few instances is it possible to make a diagnosis by depending alone on the result of such analysis.

The stomach contents after an Ewald-Boas test breakfast: Excluding the rare cases of heterochylia, the presence or absence of hydrochloric acid is of great value. Achylia gastrica may be positively diagnosed.

The mixture of mucus in the stomach contents means much in diagnosis. The presence of stomach mucus in large quantities points either to the presence of a definite gastritis or to a reflex stimulation of the mucous glands by diseased conditions outside the stomach, especially in the gall-bladder, appendix or kidney. If hydrochloric acid is absent, together with much stomach mucus, a true gastritis is present. Pus indicates a severe grade of gastritis, or cancer. The presence of lactic acid and Boas-Oppler bacilli do not necessarily mean that cancer is present, inasmuch as both are found in food stagnation without hydrochloric acid. Occult blood in the stomach contents is of no diagnostic value. The so-called hyperacidities which are, as a rule, true hypersecretions, are, in the large majority of cases, due to diseased conditions outside the stomach itself, namely, appendix, nervous system, and the toxins, particularly tobacco. Where the stomach itself is at fault there is usually an excess of stomach mucus with an excess of the acid, making the clinical picture of a true gastritis hyperacida. In both ulcer and cancer of the stomach the secretion of mucus is usually increased. The presence of free HCl does not exclude cancer, particularly in those cases where the cancer develops on the site of a chronic ulcer.

Fasting stomach contents: The chief value of the fasting stomach contents is in detecting disturbances in motility. Microscopic food residue does not by any means indicate ulcer or cancer, but may often be found in atonic conditions. As a general rule stagnating food in the morning fasting stomach, if hydrochloric acid and sarcinae are present, indicates a benign obstruction. On the other hand, should hydrochloric be absent, Boas-Oppler bacilli and lactic acid be present, the diagnosis of cancer is strongly probable. In gastric crises stagnating food is often present and does not mean pyloric obstruction.

The results of the glycytryptophan tests in our laboratory are interesting. Out of twelve posi-

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tive reactions, the diagnosis of cancer was confirmed in ten. Two positive reactions occurred in achylia gastrica. Twenty negative reactions occurred in achylia gastrica. Four negative reactions occurred in cancer.

Feces: As a routine practice it is best to have the entire specimen brought, in a tightly closed mason fruit jar. It is easy then to observe the presence or absence of early gas, indicating fermentative changes, the color, the consistence, and presence or absence of mucus, pus or blood.

The feces are formed in the sigmoid and many small fragments indicate a pathologic spasticity of this part of the bowel. A portion of the mass is rubbed well with water and poured into a black plate. Large particles of mucus come from the large intestine. Very intimate admixtures of mucus originate in the small intestine. Parasite eggs are best searched for by Yavita's method. One should never exclude ameba by stool analysis as we have repeatedly found them with the sigmoidoscope after prolonged and vain search in the feces. The sieve often makes a diagnosis, that is, gall-stones, parasites, etc.

Microscopic preparations are made, and the starches, fats, and muscle fibers are estimated. With proper knowledge of the patient's diet, a very good idea can thus be obtained of the functional disturbances in the intestine. Voluminous stools in which a large amount of fat, muscle fibers and starch occur indicate disease of the pancreas. Much connective tissue residue shows that hydrochloric acid is absent in the stomach contents. Sarcinae always indicate pyloric obstruction. Boas-Oppler bacilli may indicate cancer of the stomach. Pus and visible blood indicate ulcerated lesions of the large intestine: in the vast majority of instances these lesions are cancerous. Bright red blood when mixed with mucus is characteristic of hemorrhoids or adenoma of the rectum or sigmoid. Black stools indicate hemorrhage from the stomach, or the presence of bismuth or iron. The test for occult blood if carefully done is the most valuable single test we have. The continuous presence of the reaction on a bland diet free from all sources of blood in the food, teeth or gums, nose or throat, is almost pathognomonic of cancer existing in the stomach, small intestine, or the first half of the colon. In cancer of the small intestine particularly it may be the only sign present. Intermittent bleeding is very characteristic of gastric ulcer and is dependent on the quality of food, the ulcer bleeding when coarse foods are administered and stopping on a diet of soft foods. Therefore, if one is watching an ulcer case and the occult bleeding does not cease on a diet of soft foods, a diagnosis of beginning cancer should be made and operation not delayed. In a few cases a diffuse scirrhus carcinoma will not give the occult blood reaction. With this single

exception it is obvious that a negative occult blood reaction is of tremendous importance in excluding cancer.

Wall Building.

SEROLOGY *

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So much has been said and written about the Wassermann reaction that a repetition of the theory and technic is unnecessary. It is presumed that the physician has read so much about the various methods, especially the original reaction, that anything which might be said can readily be understood. There are a few things which have recently been added to the original reaction, in the form of controls, for the purpose of making it more accurate.

Two or three years ago the percentage of positive reactions in known cases of syphilis was considerably lower than to-day. Modifications have been offered, but none of them has yet increased the clinical value of the reaction, nor has any simplification been suggested which does not sacrifice its accuracy.

The chief source of error is usually the result of the improper use and the improper kind of antigen. Watery, alcoholic, ethereal, and acetone extracts of syphilitic liver, normal human or beef heart, extracts from gummata and various other tissues have been used.

I have found that the best antigen is made from the white glistening gumma. At the present time I use three antigens: The acetone extract of human heart, the alcoholic extract of syphilitic liver, and the acetone extract of the gumma. I employ three antigens for each test to overcome the various statements made by the different men. Some say that the alcoholic are the best, others say the ethereal are better, and so on. In my experience, I find that the acetone extracts are more sensitive than any other form. Occasionally, I get better results from the alcoholic. But as a whole the acetone extracts are far superior. So if there is a difference, which I am at a loss to explain, I believe more than one form should be used.

My extracts are prepared fresh every week, as it has been my experience that all forms spoil in a very short time. They become anticomplementary, or on account of evaporation fix complement in the presence of sera which are other than syphilitic.

The various tissues to be extracted are obtained in as sterile a condition as possible, cut into small bits, dried and finely powdered in the

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mortar. The dried powder is then placed in absolute alcohol for twenty-four hours and again dried. It is then kept in sterile glass tubes until wanted. One gram of the dried powder is extracted with 100 c.c. of the extractor. After forty-eight hours in the incubator the liquid is filtered and titrated against all possible conditions. The minimum and maximum doses which will fix complement in the presence of a syphilitic amboceptor only are determined. The antigen is titrated the day before the actual test.

The hemolytic serum is likewise titrated the day preceding the actual work. So it is plain that the greatest amount of time consumed is in the preparation of the various ingredients and the careful, regular titration of the antigen, complement, and the hemolytic serum.

It is accordingly impossible to do the Wassermann reaction every day unless the antigen, etc., is titrated at the time it is prepared and used that way. This accounts for the various results obtained by different serologists.

It would be a very simple thing to do the Wassermann test if the antigen, complement and hemolytic serum were staple substances. The necessary thing then would be a regular scheme as to the amount of each to use, and a few test-tubes; and in a few hours twenty-five to fifty tests could be easily made by any schoolboy. I find that I have to work considerable overtime for days preceding the tests to get everything in readiness.

The chief question which concerns the physician to-day is the value and the interpretation of the Wassermann reaction.

The results in the various stages of the disease have been as follows:

Known untreated cases: Congenital, 100 per cent.; secondaries, 100 per cent. positive; primary (usually two days to two weeks after the appearance of the initial lesion), 100 per cent.

I have two cases on record that were exposed to the disease, giving a strong positive reaction ten and twelve days, respectively, before the appearance of the initial lesion.

Early tertiary, 100 per cent.; late tertiary, 78 per cent.; tabetics and paretics, 45 per cent. blood, 90 per cent. spinal fluid.

A negative reaction, if there are no symptoms whatever, no treatment for a long time, no alcohol, or other substance known to interfere, taken for at least twenty-four hours preceding, means, I believe, no syphilis. This I have carefully observed during the last three years on a number of selected cases. I have, however, not allowed myself to be misled by this, for I insist, in spite of this belief, on a Wassermann at least every six months, including a spinal Wassermann, for a period of two years after all symptoms have disappeared. If symptoms do exist, I do not

consider a single negative Wassermann of any value. During the latent period there exists an equilibrium between the host and the organism and the result is often negative. This condition does not exist indefinitely, but can be determined by a regular course of tests. This is sometimes objected to on account of the cost. I have made it a rule to accommodate the physician in such cases. Some patients can and will pay the required fee readily if things are properly explained to them. Others will not pay simply because they cannot be made to understand, while there are others who will not or cannot afford the expense.

In these cases the doctor should use common sense, and arrange the fee or fees to fit the case. It is not the intention of the serologist to deprive a patient of what is due him, nor to hamper the doctor in his diagnosis, but rather to help both all he can, irrespective of the fee.

A succession of negative reactions both of the spinal fluid and the blood must be obtained before syphilis can be excluded as the cause of any condition. A single negative reaction in a nervous disease means nothing. A negative reaction frequently becomes positive after a single injection of salvarsan. The salvarsan has a precipitating or a provocative effect on the reaction. It is probably due to the liberation of the endotoxins contained in the spirochetes. Cases should be controlled by provocative Wassermann reactions. If a case is negative before salvarsan and positive after, the patient is, of course, not cured. If, however, the result is negative, it is thought that he is cured. This, of course, requires more confirmation by actual observation.

Gemmerich and Milian found that if patients were injected with 0.3 grm. salvarsan six months or so after the supposed cure, and the blood and the spinal fluid were examined several times for two weeks, a positive result would always occur in cases not cured, and a negative in those that are cured.

The effect of treatment on the Wassermann reaction in the majority of cases was to render it negative. Some cases are not influenced by treatment. The use of potassium iodid, mercury and arsenic produce a negative Wassermann reaction, but it does not always stay negative; some cases giving a weak positive may become very strongly so after treatment.

Forty-five per cent. of cases sent to me that had been treated from two to four years with mercury, and that appeared well, gave positive results.

The use of salvarsan in preference to neosalvarsan has resulted in negative reactions in 71 per cent. of cases receiving from one to twenty injections. The results from neosalvarsan were much lower.

A negative blood finding should never be considered final, as the spinal fluid may be positive. The condition may be latent and localized in the central nervous system, and only after a negative spinal finding preceded by a number of negative blood findings, should treatment be stopped.

In regard to the positive side of the question, I will emphatically say that if the test is done properly by a competent serologist, with all titrations carried out properly, and regularly preceding each and every test, a positive result always means syphilis. You hear and read every day that someone obtained positive results in a case of this and that. I do not make any exceptions, as my experience has proved to me that if my antigen is properly titrated it is impossible to get a positive result with any serum other than syphilis.

If a patient has tuberculosis, a cancer, or any other condition, there is no reason on earth why this patient should not have syphilis.

By a system of checking the findings and results following treatment I have been able to follow this very carefully. The patient is sent to me without any history whatever. The result is sent to the doctor with a laboratory record sheet, which the doctor is asked to fill out and return to me. Unfortunately many doctors do not return the sheet, and, of course, I am somewhat hampered in compiling my records, especially regarding the results following the treatment.

Some time ago a patient was sent to me for a Wassermann test, who had what appeared to be chancreoid. The history I received after the test was that this lesion appeared four days after exposure. There was much pain and swelling. The test proved positive. A single dose of salvarsan was given without the least bit of improvement. The patient became very much discouraged, consulted one of the local genito-urinary men, circumcision was performed and the wound healed very quickly, giving an excellent result. The patient was advised that he had no syphilis, and told to discontinue treatment. About two months ago I was informed by an oculist that this same man was sent to him for a condition which proved to be a distinct syphilitic chorioiditis, which is practically well at this time following energetic antisyphilitic treatment.

Another case: A man was sent to a local surgeon for operation. The condition seemed to be one of biliary obstruction, probably gallstones. An exploratory operation showed that the liver was full of what the surgeon called metastases of a carcinoma, probably in the pancreas or stomach. The stomach was found adherent to the pancreas, and the head of the pan-

creas was twice its normal size. The wound was closed and the case was pronounced an inoperable cancer. Several days later I suggested a Wassermann test for my own satisfaction. The result was strongly positive.

A single dose of salvarsan followed by big doses of mercury did wonders, and to-day this man is feeling well, doing his regular work on a farm near Jacksonville, Ill.

I accordingly advise a Wassermann test in all cases of malignancy. If a negative result, do another; you cannot hurt the patient, nor can you cure him, if the condition is other than syphilis.

The next thing worthy of consideration is the degree of fixation—feebly positive, positive, or strongly positive. Some serologists report positive plus, two plus, three plus, etc. I believe that there should be no such distinction. I do not believe that a feeble or a strong means anything else than that the patient has syphilis. If I could get others to agree I would give my results as either positive or negative.

I do not believe that a feeble reaction following salvarsan gives much information as to the value of the treatment. I have found that the patient's serum becomes hemolytic to sheep's corpuscles after treatment, especially after mercury.

There is only one method which I believe is of any value; that is the titration of the specific amboceptor. I mean in all cases, especially nervous syphilis, a titration of the antibody content of the spinal fluid should be made to determine the value of the treatment.

As we have several factors to bear in mind, such as the hemolytic properties of human sera, especially following treatment, I cannot give you a reason for the various results. The Wassermann reaction is as yet not completely explained, so it is difficult to say why we get this or that result.

The presence of a positive Wassermann reaction of the blood indicates a general invasion of the body. In early syphilis, especially the primary stage, it is a mistake to wait for the secondary eruptions. You might prevent a general infection. Some say, why not wait? he has syphilis and you cannot change that. I disagree with any such statement, and suggest that all primary sores, no matter what they prove to be, be excised at once and be examined for spirochetes. A Wassermann test should also be done at the same time, and another about three weeks to one month after the excision. The time of localization is as yet unknown. It is probably so until the appearance of the Wassermann. This is an old theory advanced by many. Some to-day deny its advantage. If the excision does not abort the condition, it at least removes the

source of infection, which is teeming with the spirochetes.

To substantiate my belief, I offer a number of cases. In four cases the lesion was removed possibly five to ten hours after the patient noticed it for the first time. Spirochetes were found in each case. A Wassermann test was made at the same time and found to be negative. Three weeks later another Wassermann was made and found to be negative. Six months later another test was done on two of these patients; the other two failed to return. It is now two years since the excision, and I have not heard from either of them.

Three cases in which the sore was removed but no Wassermann test done at the time were told to return in three weeks. Two gave negative results, and the other returned with secondaries and a strong positive reaction. The mistake in the last case was due very likely to the fact that a test was not made at the time of excision, and very likely the condition was general at that time. I am now suggesting this to physicians and will excise all lesions for immediate examination for the spirochetes whenever asked to do so.

A Wassermann test of the urine should be made in cases showing symptoms of nephritis. I have found the urine positive in 90 per cent. of all cases in which the nephritis was due to syphilis. This seems to be a good scheme to follow in those cases that are to receive salvarsan. I have always recommended salvarsan in those cases giving a positive Wassermann of the urine, in spite of the kidney condition, and in no instance has any trouble resulted.

The Wassermann test should be applied to all cases of neurasthenia, as my experience, as well as that of many others, has shown that from 50 to 62 per cent. of all such cases examined give a positive result. If the blood is negative, several tests should be made and the spinal fluid also examined.

In cases sent to me, 43 per cent. gave positive blood findings and 11 per cent. positive spinal findings.

A spinal Wassermann should be made in all cases of tabes and paresis, if a negative blood finding is obtained. In twenty-seven cases of tabes a positive reaction of the blood was found in only eleven cases, while the spinal fluid was positive in twenty-four, doubtful in two, and negative in one.

In nineteen cases of paresis the blood was positive in five cases, and the spinal fluid positive in eighteen cases, and negative in one.

In patients with no nervous manifestations, but who have syphilis, a negative blood Wassermann and a positive spinal is simply a forerunner of a late syphilitic condition, as tabes, etc.

The reason that a positive Wassermann of the spinal fluid persists with a negative blood in cases having had treatment, is probably due to the fact that it is very difficult to get drugs to the meninges through the blood, on account of the resistance offered by the chorioid plexus.

Perhaps this is why it was suggested that the patient's own serum be injected into his spinal canal after he had received an injection of salvarsan. Some very good results have been reported.

The result of treatment on cases of tabes requires some consideration. In about 300 cases of tabes and paresis the Wassermann results have been closely observed. Some two or three hundred cases might be added to the above, if the physicians would return the yellow record sheets sent them.

Many of these cases, in spite of energetic treatment with salvarsan and mercury, continue to give strong positive results. Thirty per cent. of these cases have become negative and considerably improved by vigorous treatment. Some gave negative blood findings, and positive spinal findings, but the antibody content was reduced.

Unfortunately it is impossible for me to give you more results of treatment, as I do not treat any patients, depending entirely on the returns I get from the doctor who sends the patient for the test.

I believe that I have mentioned all that I know about the Wassermann reaction. I have tried to tell you in plain words what is known. I cannot in conclusion urge too strongly the use of the Wassermann reaction on all cases that are the least bit in doubt.

You will not only increase your knowledge of your case, but will in many instances do a lot of good for your patient. It tells you so much, if not everything.

It might be well to caution you against the use of alcohol, anesthetics, excessive sugar, fatty meats, and especially mercury before the test. At least two weeks should elapse before each patient is sent for a Wassermann. In the case of alcohol, at least twenty-four hours should elapse and possibly more. The patient should not be sent after eating a hearty meal, as odd results have been reported. An experience in ten cases of secondary syphilis who had taken a bottle of beer or a drink of whisky gave the following results: Four cases who drank a bottle of beer two hours after the first Wassermann gave a completely negative result after five hours, and again strongly positive after twenty-four hours. One case remained doubtful for forty-eight hours; two feebly positive for five hours and strong in ten hours; three cases were not affected at any time.

400 Metropolitan Building.

LUKE, THE GREEK PHYSICIAN

PART V

THE GALILEAN PROPHET—THE GREEK PHYSICIAN

GEORGE HOMAN, M.D.
ST. LOUIS

In the first paper of this series the words of Professor Harnack¹ were quoted to the effect that in earlier times Greeks with religious interests were disposed to regard religion mainly under the category of healing and salvation, and this opinion accords with the tenor of Luke's attitude as disclosed in his gospel and the Acts. His chief concern was for the healing and well-being of humanity here in this world, thus following the example of the Great Physician. His works show little interest in the dialectics of religious dogma or the doctrinal disputations which too often have grievously distressed mankind through the teachings of his associate, Paul, the self-styled apostle to the Gentile world.

The intellectual pedigree of this Greek physician, as before outlined, the climate of scientific and religious opinion in which he seems to have been reared, together with his medical acquirements, would reasonably lead to such a result, especially in view of the fact that the wide separation now seen between the ecclesiastical and medical professions did not exist in his time, for the brain power of the race had not advanced sufficiently to show itself generally in such results; hence, no hard and fast line can be drawn between his work as a medical practitioner and his service as a religious apostle.

The dignity, freedom and versatility of his intelligence and breadth of sympathy toward all things human, as disclosed in such records as have come down to this age, invite comparison with the mental traits and moral tendencies of others who were also connected with the beginnings of Christianity. And such a consideration, if honestly given, must necessarily disregard much that has come to be esteemed orthodox in religion—the point of view being strictly medical concerning the conditions and circumstances in nature that produce human brains which differ so markedly in capacity, apprehension, perception and other qualities, and which may serve to mark their possessor as a leader in power among men. Such consideration obviously involves no questions of faith or pious belief but rather those of anatomy, psychology, physiology, pathology and many other related branches of established science and modern knowledge.

As in Luke was found the fittest exponent of the doctrines of the Galilean teacher through a mutually sympathetic and conditioning quality

of brain, it may be not out of place to notice briefly the human character and capacities of the Great Physician in the light which the scriptural record by his best apostle throws upon the question.

According to the account by Luke, following the reputed birth at Bethlehem, the years of Jesus to the age of 12 were spent at Nazareth in Galilee, and show in brief a youth of inquiring mind, keenly alert mentally, even holding disputations in the temple with the priests, and exhibiting a favor toward the ancient Hebrew faith that was entirely natural, rational, racial and traditional. But, after reaching the age mentioned, nothing seems to be known of his history, until he reappears as a man 30 years of age, was baptized, and began a three-year period of healing and preaching in Palestine and nearby parts of western Asia; all of this experience culminating in the crucifixion at Jerusalem under Roman civil law as provided in cases of religious heresy possibly, political treason and certain other offenses—this particular modus of punishment, so far as known, being in no wise different from the manner of its enforcement in other instances falling within the same category, and the event therefore is entitled to no special distinction on that account.

As before stated, history, both sacred and secular, is silent as to the place or places where these eighteen years of the most important formative period of human life were spent by the Galilean prophet, and, again, only inferences can be advanced, suggested as they are by certain internal scriptural evidence, but tradition, steadily pointing in certain directions, has tenaciously attached itself to the folklore of tribes inhabiting western and central Asia. This applies even to countries whose people are intensely Moslem in religious belief, and among whom no motive would reasonably exist for cherishing such a legend, as the mutual strong antagonism of Christian and Mohammedan doctrines is well known, and this fact entitles the story at least to respectful attention. In support of this view a well-known traveler² writing of Samarcand (capital of Asia 600 years ago), says:

"There is a legend that Jesus, with his father and mother, once came this way from Galilee, with a caravan of merchants, and stopped in Thibet for many years, where his father pursued his trade as a carpenter, and Jesus studied in a medresse with a Buddhist priest."

In support of such a possibility is the fact that the great thoroughfare between the Mediterranean basin and the Far East starting from the lower Nile passed eastward through Suez, then northward along the shore of the Mediterranean sea into Samaria; then, turning eastward across Pal-

1. Luke, the Physician, p. 176.

2. Turkestan, The Heart of Asia, Wm. Eleroy Curtis, 1911, p. 326.

estine, through the geological fault known as the plain of Esdraelon and the vale of Jezreel crossed the river Jordan just south of the sea of Galilee, thence continuing onward directly or by branches to Damascus, Palmyra, Nineveh, Bagdad, Babylon, Mesopotamia, Persia, Central Asia, etc. This was the principal caravan route of the world, over which passed countless armies in military movements and, as well, human travel and commercial traffic for scores of centuries, the point of present interest being that this remarkable highway was located but a few miles south of Nazareth, while one of its main branches, leading northward into Asia Minor, reaching Antioch, Tarsus, Ephesus, etc., passed directly through that town, thus putting it in close touch with the commercial, religious, political and educational life and movements of the entire world, as known at that time. The military importance alone of this beaten pathway of races and nations, since man first made his appearance there, is proved by the fact that its course across Samaria marks the locality where more human blood has been shed in battle than any other place on earth, the geology and topography of that country making it a strategic point of the first importance, and accounting for the bloody struggles that have continued there even into modern times. Many other features of this small but interesting land are described as a result of the survey expedition sent out by the Yale³ Corporation a few years ago.

In his book on China and the Chinese H. A. Giles says that the influence of Greek civilization, speech, art, etc., extended from Bactria, the most easterly Greek province in Asia and was markedly felt in China for centuries before the Christian era; and that there was a free interchange of ideas across the width of Asia cannot be doubted with the effect of liberalizing and broadening the religious conceptions of those of plastic mind who came in contact with the Confucian and Buddhist forms of faith, which had acquired their most attractive features some two thousand years ago. That the mind of the young Galilean was thus influenced and from these sources can hardly be doubted to judge from the broad catholicity and elevated sympathetic humanity that mark his teachings—so different from what would have followed the inculcation only of the severe and exclusive doctrines laid down by Hebrew theology.

The derivation of the golden rule from Chinese sources and its adaptation by Luke to Western thought by the change to an affirmative form; the probable borrowing by him of the Oriental legend touching the virgin birth of a savior (already a part of Buddhist faith) and, with his genius, clothing the idea in strikingly poetic and dramatic form; these two, together with the conception of the fatherhood of God and the conse-

quent brotherhood of man, as foreshown from Hebrew sources and which probably dated back to an Egyptian origin, constituted the chief features of the new religion as declared by the Greek apostle in his gospel and the Acts.

The typical ecclesiastical mind, solidly holding to dogma and doctrine which the advances of knowledge and science have shown to be inadmissible in the light of to-day, has in places made some unwilling concession, the teachers of medical branches in church institutions usually being the first to show such liberalized tendencies. For example, the professor of mental philosophy in the Jesuit college at Stonyhurst concedes that cerebral changes evidence acts of intellect and volition, and says further:⁴

"Intellect and not imagination apprehends the universal relations which form the framework of science. . . . When uncontrolled by reason, (imagination) may pervert and mislead the powers of judgment and may so confuse the reason that fiction is substituted for objective reality and brilliant poetic hypotheses are preferred to the prose of commonplace truth" (p. 170).

He concedes centers of muscular movement, sense perceptions, etc., and also the possible existence and demonstration of cerebral areas of moral, intellectual and other faculties or qualities in man.

Following the views thus expressed, the words of Professor Pfeleiderer, found in the work named in my last paper, suggesting the manner in which elements of faith, often held to be essential parts of religion, come into existence, may be of interest. He says:

"Originally a legend becomes a parable, the parable is expanded into an allegory, and the allegory is finally transformed into a miracle-story" (p. 165).

And he says further:

"For all their extraordinary character they are nevertheless not, strictly speaking, miracles, for they have their sufficient cause in the psychical condition of the persons to whom they occur; they are effects of psychic forces, the tension of which discharges and relieves itself in them. They therefore fall under the general category of the "enthusiastic" phenomena which characterize Christianity from the commencement, and which must be assumed to have been an important factor in the work of Jesus and the results produced by him" (p. 498).

In these words by two distinguished Christian ecclesiastics is a belated acknowledgment of the truth of Greek medicine and psychology as taught by Hippocrates and reflected by Luke the Physician, and which in effect has been denied or ignored for nearly two thousand years by spokesmen for the church, in almost every one of its many divisions. This truth is that soul, spirit, mind, intelligence, imagination, will, character, reason, religion, in time and in nature, are bot-

3. Palestine and its Transformation, Prof. Elsworth Huntington, 1911.

4. Psychology: Empirical and Rational, Michael Maher, S. J., 1900.

toned on and conditioned by the physical constitution and normal functioning of the human brain.

The failure of the church, as such, to hold the interest of many leaders in thought and works that are vital to man on social, economic and other lines, gives sharp point to the criticism that the world is outgrowing dogmas and doctrines dating back to a time when the human race was in its mental childhood, that unresting but unhalting movement is a law of the universe and fully applies to man in his intellectual and moral conditions; and that religious ideas expressed in the fancies, folklore and legends of primitive peoples do not suffice for the needs of to-day. An intelligent world now demands proof of cerebral growth in religion as in other human concepts and concerns, and this is a ground for hope: for the coming of the Galilean Prophet and the Greek apostle in their time showed that old things were passing away, and the history of all religions proves that the same must occur again unless Christianity takes heed and becomes acceptable to the sane reason and scientific righteousness of present times.

The two apostles, the matured growth and functioning of whose brains may be studied with most advantage by physicians, are Luke and Paul, as these men stood on a somewhat similar ecclesiastical and mental plane but differing widely in basic moral conceptions and scruples of conscience—these being due to racial, ancestral, educational and other factors that influenced the structural shaping and functional working of their cerebral organs.

This by some may be deemed a rash assertion, but the words of the cautious Stonyhurst professor justifies it, and its confirmation may be found in the study of the lives of modern men taken in connection with the revelations of the autopsy room. For, let it be conceived that the brains of these two men were laid before a body of expert anatomists, skilled psychologists, trained physiologists and able pathologists for conscientious study and it can hardly be denied that they could point to primary deviations in form, structure and growth that would go far to explain the divergences in intellectual operation attested in life by the witness of their respective words and deeds. In order to show that such deep-seated differences in character were present and manifested in life, an incomplete estimation of the two apostles will be cited, the author being Prof. A. Harnack,⁵ of whom another theologian (Sanday) says

... "that he has not only all the German virtues in the highest degree, but he has others that are less distinctly German—a width and generosity of outlook, a freedom from pedantry, a sympathy and understanding for human weakness, that are all his own."

5. "The Date of the Acts and the Synoptic Gospels," G. P. Putnam's Sons, N. Y., 1911.

For convenience this expression of judgment is arranged in parallel form:

CRITICAL ESTIMATES OF LUKE AND PAUL

Luke

"To what extent he shared St. Paul's peculiar views can be learned only from his own works. The common assumption that a companion . . . must be pictured simply according to the Master is without any basis, and is doubly reprehensible in the case of a Gentile of no slight culture, who already, before his conversion to Christianity, was in touch with the synagogue. . . . When St. Luke wrote the ecclesiastical situation was very different from what it was at the time of the Apostolic Council and the Epistle to the Galatians" (p. 33).

(A fuller estimation of the character of Luke will be found in Harnack's "Luke the Physician" quoted in part in the first paper of this series.)

Paul

"He recognized the God-given privileges of the Jewish nation, and at the same time by his work as a missionary he abolished them. . . . St. Paul . . . had nothing tangible to depend upon except the force of his own progressive religious conceptions. His limitation lay in this, that he had not thought this conception out to the end, and accordingly held fast to an indefinite compromise with Jewish convictions; and that, instead of carrying on the fight along the whole line he on important points yielded to the Jew in the Jewish Christian—not from cowardice or insincerity, but because the Jew in himself was still too strong. . . . In his inward life he used himself up in the effort to mediate between the idea of freedom and universalism on the one hand and the ancient Jewish claim on the other; in his outward life he never succeeded either in making himself appear a consistent man, or in freeing himself from the reproach that he lived in a contradiction" (pp. 60, 63).

The word "contradiction" is a rather mild term to express the intricate, confusing and inconsistent theological doctrines and abstractions put forth by this apostle, whose desire deemed to be to try to face all ways at the same time, be all things to all men—in fact it would be difficult for the untrained eye to follow the sleight with which the tenets of the faith were handled by him. Aberrant mental workings suggesting perhaps conditions of abnormal anemia or hyperemia seem to have been not uncommon, with pronounced ecstasies and inconstant visions following the furious persecuting outbursts of his earlier years. In short, it may be soberly suggested, in view of such mental vagaries and eccentricities, that the founder of Christianity would in life have withheld assent from the doctrinal anomalies and misconceptions as thus presented and preached to the world.

The inherent and peculiar differences between primitive Hebrew religious thought and original Greek religious conception may be shown in brief by quotations from the Acts (VII and XVII) the first being taken from the supposed speech

by Stephen before the Council at Jerusalem when on trial for heresy and which immediately preceded his lynching, swift vengeance having followed his intemperate utterances; the other from the address written by Luke and put into the mouth of Paul as having been spoken on Mars Hill at Athens:

Hebrew

"The voice of the Lord came unto him saying, I am the God of thy fathers, the God of Abraham, and the God of Isaac, and the God of Jacob. I have seen, I have seen the afflictions of my people . . . and have heard their groaning and am come down to deliver them. . . . This is he, that was in the church in the wilderness with the angel which spake to him in the Mount Sinai, and with our fathers, who received the lively oracles to give unto us. . . . Ye do always resist the Holy Ghost; as your fathers did so do ye. . . . Who have received the law by the deposition of angels, and have not kept it."

Greek

"God that made the world, and all things therein, seeing that he is Lord of heaven and earth, dwelleth not in temples made with hands; neither is worshipped with men's hands, as though he needed anything, seeing he giveth to all life, and breath, and all things; and hath made of one blood all nations of men for to dwell on all the face of the earth, and hath determined the times before appointed and the bounds of their habitation; that they should seek the Lord, if haply they might feel after him and find him, though he be not far from every one of us. For in him we live, and move, and have our being; as certain also of your own poets⁶ have said, for we also are his offspring. Forasmuch then as we are the offspring of God, we ought not to think that the God-head is like unto gold, or silver, or stone, graven by art and man's device. . . . Because he hath appointed a day, in which he will judge the world in righteousness."

The two brains imperfectly represented in the foregoing expressions were national types and must have differed individually in form and function in accordance with the influence of natural laws that govern and direct human development in all its phases. The one type of brain—high, narrow, restrained—represented in its age, pride of race, national isolation and theocratic doctrine in religion, intensified by centuries of time during which the fixed and ruling idea was that here was a people chosen by the creator of the universe for the enjoyment of special favors and exclusive blessings, hence any deviation by the individual from the standards of a creed so imperative and inflexible would mean a mental and moral struggle in which certain tracts and centers of the brain would be vitally involved, and the cerebral

consequences of which could not always be foretold.

The other brain—balanced, rounded, spacious—represented the very opposites in spirit, race and religion; an organ evidencing the sustained and finished traits of Greek character and naturally fitted to extend generous hospitality to any form of faith or religion that could show a reason for its being.

When, during life, the supreme test was applied to these two organs through the preaching of Christianity, the effects observed were consistent with what medical psychology would in reason have foreseen; that is, in the case of Luke the amplitude of his knowledge of human nature and comprehensive quality of mind enabled him easily to apprehend and absorb all that there was in it of truth, and, with widened knowledge, make it a part of his own faith. To the Greek nature this was a logical step for which the foundation principles of the race and the practice and precedents of many generations had paved the way.

But with regard to Paul—narrow in the religious training of the Pharisee, holding jealously to the theological tenets of Israel, harsh and prejudiced toward heretics and heathen—the effect was very different, and the experience following the shock suffered by him on the way to Damascus proved the organic incapacity of his brain to accommodate such alien impressions without severe mental wrenching and confusion. It is true that nature finally made partial adjustment in this respect, improvising functional capacity for the emotions or convictions newly experienced, but the downright infirmities and aberrations noted in his later life show that the stability of such provision fell short of what would have been present if development in this respect had been racial or hereditary, or if a structural beginning had been made early in life.

To the body of experts before suggested as being fitted to judge the evidences afforded by these organs must be committed all questions touching the particular centers or tracts concerned, and which would explain the phenomena presented by the individual during his lifetime, and, furthermore, the hope may be expressed that the credibility and value of such testimony will not be lost on theologians and religious teachers, for, too often, the attitude of ecclesiastical authority on vital questions has been as peculiar and uninspiring as that of a stylite zealot in olden times dwelling on top of a column to escape worldly defilement.

While giving due attention therefore to the scriptures of the human Bible, no less important are the scriptures of the human Brain—etched and written by the hand of nature and coming in a new and revised edition with each succeeding generation—by no means should these be

6. The quotation is from the Hymn to Zeus by Cleanthes the Greek poet who lived in Athens several centuries before the present era. This hymn is spoken of by critics as an "admirable union of religious feeling and philosophic thought," and its mention shows Luke's acquaintance with the best work of the classical Greek age.

neglected by those who would lead in spiritual perception and knowledge. Some of the bitterest struggles that have plagued the world have been waged between those who could not agree on the meaning of print and paper—surely the honest study of the brain, its power and promise, could lead to no such calamity, for in the boundless possibilities of brain growth lie sane moderation and soundness of knowledge.

Astronomers, working with the means and methods of science to-day, point to myriad systems of suns in the universe with their dependent spheres, some at distances so vast that even their light may require scores of years to reach us, and which, read by the spectroscope, shows them to be composed of elements and substances the same as are found in the earth. The magnitude of some of these distant suns completely dwarfs our solar center, while in relative importance our own world would seem little more than a spall of creation, a elod in space. This knowledge has been gained within recent centuries and gives forceful denial to views long taught by scholastic theology touching the creation of this world, the genesis and nature of man, etc. These teachings, based on the vivid fancies and brilliant folklore of a numerically small and isolated fraction of the human race, recorded thousands of years ago, do not commend themselves to sober intelligence and reasoned truth to-day, which decline the thought that the maker of such a universe should show gross favoritism toward a particular few of this world's creatures in concerns which, we would be made to believe, affect the eternal destinies of the whole human race. As shown by the older scriptures the Hebrew genius early developed remarkable powers of imagination, such as also marks the childhood of the individual, but the primitive records of other races are often equally as important, none of them being of other than natural origin, and all are to be taken for whatever may be their intrinsic worth in religion, science, philosophy, history and so forth as determined by the best knowledge of to-day. It follows, therefore, that the time must come when even theologians will put away childish things and live and move in the light and learning of modern thought.

This is already the attainment and attitude of that calling whose mission and work is to heal, and when the scepter of authority departs from the ecclesiastical Judah, as seems likely, it will pass naturally as a symbol of both science and faith to the medical profession, which in conscience, character and capacity will be found not unfitted to receive it, the title thereto being the evidence given of service rendered to humanity in its greatest need by those who are continually in closest and most sympathetic touch

with the ills and infirmities of all men, thus fulfilling the spirit and message of the Galilean Prophet and the Greek Physician. The truth of the declaration before quoted to the effect that ancient Greek thought held healing and salvation to be the soul and substance of true religion will be realized, unless all signs fail, by advancing enlightened medicine, the aim and purpose being to give here and now a better world to better people through services and works that must ever be rendered principally by medical hands and minds through avoidance and removal of causes of physical and personal ills, and the betterment of earthly conditions many of which now make for bodily as well as mental and moral degradation and ruin.

As the soul of Christian belief was derived from the Galilean Prophet so the brain of that religion was found in the Greek Physician showing forth its principles and scope in this life; "for medicine must more and more become the guide in the solving of social problems" (Jacobi) which also embrace those of religion, and the key to which is found in the gospel as written by Luke. He left no message in medicine or religion that has reached this age which echoes the personal note, and by so much has both science and faith been made poorer and this in consequence of his unobtrusive nature, which preferred in honor others rather than himself.⁷

Uncertain tradition says that Luke lived to be more than four score years of age in a state of celibacy, suffered crucifixion at Elea in Peloponnesus near Achaia, and received final interment in the Church of the Apostles at Constantinople about 350 A. D. In whatever manner the end came to Luke it may be well believed that he met it with the same firm dignity and serene composure that marked the bearing of another great Greek of an earlier age who, when the hour for taking the hemlock had come, calmly spoke to those around him:

"A man of sense ought not to say . . . that the description . . . given of the soul and her mansions is exactly true. But I do say that, inasmuch as the soul is shown to be immortal, he may venture to think . . . that something of the kind is true. . . . Wherefore, I say, let a man be of good cheer about his soul, who having cast away the pleasures and ornaments of the body . . . has sought after the pleasures of knowledge; and has arrayed the soul, not in some foreign attire, but in her own proper jewels, temperance, and justice, and courage, and nobility, and truth—in these adorned she is ready to go on her journey . . . when her hour comes. Me, already the voice of fate calls. . . . Be of good cheer then . . . and say that you are burying my body only, and do with that whatever is usual, and what you think best."

7. "The modesty of great men which makes them certain that by their works they will be proven and makes them shun the loud proclamation to their own generation of the gifts that will have value for all time."

While in many intellectual traits Socrates and Luke differed widely, yet at bottom the Greek characteristics were the same in both, as in moral divination and spiritual prophesyings. The poetic gift of the Greek physician shows plainly in his work, and prophecy most true was spoken in words taken from one of the sublimest flights in his gospel:

"Whereby the dayspring from on high hath visited us, to give light to them that sit in darkness . . . and to guide our feet into the way of peace."

More than eighteen hundred years have served to prove the truth of the forecast that this "dayspring" was only a visitor and came not as a dweller upon earth, for the law of tooth and claw, of fang and talon, though often denied or eloked, is still in force in lands and among peoples where various forms of what is called Christianity is most loudly vaunted and proclaimed.

FREE SERVICE OF THE DEPARTMENT OF PREVENTIVE MEDICINE OF THE UNIVERSITY OF MISSOURI

O. W. H. MITCHELL, M.D.
COLUMBIA, MO.

It is the purpose of this article to call the attention of the physicians of the state of Missouri to the free service of the department of preventive medicine which is maintained by the University of Missouri at Columbia. Also a few instructions are contained herein regarding the preparations of specimens for mailing.

For several years the department of pathology made examinations of various kinds, for which a small fee was charged. The fee was necessary to cover the cost, because no funds were set aside by the university for such purposes. Charges were always minimum and many physicians submitted specimens.

About two years ago the university created the free laboratory of the department of preventive medicine, and since that time no charges have been made for the examination of specimens. When special work is required, or the work is of a medicolegal character, a fee is charged by the examiner, not the university.

Examinations which are free of charge are sputum, throat cultures, urine, exudates, blood, feces, tissue, etc. Bacteriological examination of water is done, but the express charges both ways must be paid by the person having the water examined. Special containers are necessary, and will be sent on request. No chemical examinations of water are made.

For the transmission of infectious material through the mails the law requires that such

material be sent in containers as specified in the federal postal laws. Therefore, such specimens as sputum, feces, throat swabs, etc., must be sent in special containers. Containers which comply with the federal law will be sent to any one on request.

The examination of the brains of animals suspected of dying of hydrophobia is also done. Such specimens should preferably be placed in a sealed tin, then placed in a box which contains ice and expressed immediately.

The complement-fixation test, also spoken of as the Wassermann or Noguchi test, is done by the Noguchi system. Persons wishing to have this test made should communicate with the laboratory before sending specimens, as the reagents for this test are not always obtainable.

Attention is also called to the sending of specimens in unsuitable containers. Many specimens are received in containers which do not comply with the law and the danger of breakage is great. This should not be done. The bottles, tubes, etc., in which the specimens are contained also frequently expose the examiner to great danger. Imagine tuberculous sputum which has, with great difficulty, been placed in a small vial. The chances are that the outside of such a container has many tubercle bacilli on it which come into contact with whoever handles the vial. The wide-mouthed container, which is supplied free of charge, avoids much of this danger. The same danger is sometimes encountered with throat swabs and various kinds of exudates and is to be avoided by using containers which are gladly furnished free.

Not a few specimens of tissue are received which are placed in an improper solution or in no solution at all. Such specimens should be placed either in an 80 per cent. grain alcohol or a 10 per cent. formalin solution. If special containers are necessary instructions will be sent if applied for. History blanks are returned with reports and should be sent with the next specimen. *It is important that the name of the sender appear on the container, as many times several quite similar specimens are received at one time.*

The School of Medicine is also issuing bulletins on medical subjects. These bulletins are distributed by the department of preventive medicine and are free to all citizens of the state. While the supply lasts the bulletins already published will be mailed on request and your name placed on the permanent mailing list. These bulletins, while elementary and popular, often contain literature not found in ordinary textbooks.

The department of preventive medicine of the University of Missouri is at your service. Correspond with us and send in your specimens.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

APRIL, 1914

EDITORIALS

THE FIFTY-SEVENTH ANNUAL MEETING, JOPLIN

Arrangements for the Joplin meeting of the Association are about completed. The sessions will be held in the new Joplin Theater, beginning Tuesday morning, May 12. The program contains forty-six papers and all of them will be read in general session, the sections having been suspended at the last annual meeting. Every indication points to a large attendance. Our meetings have been growing more interesting and better attended each year and a registration of five hundred has been exceeded several times. We fully expect more than that number to attend at Joplin.

The Program Committee has made special efforts to obtain papers from members who have not contributed in recent years and has been successful in securing the cooperation of many workers whose experience in various fields fit them to present the very latest ideas in practice and pronounce on the methods that have received the approval of experiment and investigation. The arrangements, as far as completed, are published on another page.

HOTELS AND ROOMS IN JOPLIN

The headquarters will be at Hotel Connor, a modern fire-proof, handsomely furnished building, and one of the best conducted hotels in the country. They will have accommodations for three hundred members. The rates, European plan, are \$1 to \$2 without bath; \$1.50 to \$4 with bath. One dollar extra for each additional person in a room. The Yates Hotel is conducted on the American plan and will accommodate fifty members. This is a clean, comfortable, pleasant hostelry near the meeting place. The rates are \$1.50 to \$2.50 per day. A large number of rooms in private homes and first-class boarding houses will be open for the accommodation of members, rates varying from 75 cents to \$1.50 per day.

Members are urged to write in advance direct to the hotels for reservation of accommodations. Those who desire to occupy rooms in private homes and boarding houses should write to Dr.

J. B. Taulbee, Chairman, Committee of Arrangements, Joplin.

Jasper County Medical Society is preparing to entertain five hundred members and their ladies, and extends a cordial welcome to every member to attend the meeting and enjoy the hospitality of the citizens of Joplin.

MEDICAL SECRETARIES MEETING

One of the most important features of the annual session of the Association is the gathering of the County Society Secretaries. Dr. F. H. Matthews, the president, and Dr. J. H. Timberman, the secretary of the Medical Secretaries Society, are preparing a program that will furnish entertainment and instruction and give all an opportunity to exchange ideas and opinions looking to the improvement of county society work.

The dinner will be held in the Connor Hotel, the exact date and time to be announced later. All county secretaries attending the annual session at Joplin are requested to be present and join in the discussion that is always interesting and lively at these gatherings.

OUR STATE TUBERCULOSIS SANATORIUM

Seated peacefully on its hill-top just outside of Mt. Vernon, in Lawrence County, is our State Tuberculosis Sanatorium, which was opened in 1907, and has been gradually growing as each succeeding session of the legislature has given it funds for the construction of new buildings.

The present capacity of the institution is for 150 patients. It is always full and there is always something of a waiting list. A new building is in process of construction which should be finished by next September and which will accommodate 75 more patients. There is every reason to believe that the next session of the legislature, appreciating the value and the needs of this institution, will give it the means of erecting at least two more buildings for patients next year. To insure this result the management is especially anxious that the medical men of our state shall appreciate the excellence of this institution, *shall take it up as their own special enterprise* (which it ought to be), and shall so influence the legislators from their respective districts as to insure their votes at the next meeting of the legislature for the necessary appropriations for Mt. Vernon.

The next meeting of the Missouri State Medical Association is to be held at Joplin on May 12, 13 and 14. Mt. Vernon is off the regular lines of travel, so that, although Lawrence County adjoins Jasper County where the Asso-

ciation is to meet, it will take quite a little extra time for members to visit the Sanatorium. But we believe it will be well worth the time and effort both as a matter of interest to the doctors themselves and as a service to the state. Some of the Board of Managers will be at the Joplin meeting ready to give information as to the way of reaching Mt. Vernon to those who wish it.

The medical profession of Missouri will probably never have so many of its membership so near the State Sanatorium as it will next May. Let them wake up to the fact that *the tuberculosis sanatorium is their special business and responsibility*. Let them, when so near it, give an extra day to looking over the institution and making up their own minds about it. The management is perfectly sure that every doctor who visits the sanatorium will be its loyal friend, supporter and "booster" from that day on. Therefore come!

PROPOSED AMENDMENT TO THE CONSTITUTION

In accordance with the requirements of our constitution and by-laws we publish the following amendment to the constitution suggested by the committee on constitution and by-laws and introduced for first reading at the annual meeting in St. Louis in May, 1913:

Amend Article 8, Section 1 of the constitution to read as follows: The officers of this Association shall be a president, five vice-presidents, a secretary, a treasurer and twenty-nine councilors, more or less, as shall be determined by the House of Delegates from time to time.

Amend Article 8, Section 3, to read as follows: The president, vice-president, councilors and orators shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of councilor, and no person shall be elected to any office who is not in attendance at the annual session and who has not been a member of the Association for the past two years.

Annul Section 4 of Article 8.

NOTABLE ADDITION TO SOCIETY PROCEEDINGS

Since the establishment of THE JOURNAL ten years ago we have endeavored to emphasize the importance of publishing the proceedings of county societies and earnestly sought the cooperation of the secretaries to bring their societies to the notice of the entire membership in this manner. We are gratified with the response for the pages of this department have gradually increased, and now almost all the societies send reports of the work they are doing. Recently

the St. Louis Medical Society and the Jackson County Medical Society each appointed a member to prepare and send to THE JOURNAL a monthly account of the proceedings of those societies. We have also published the proceedings of the Medical Society of the City Hospital Alumni of St. Louis, and of other societies composed of representative medical men which furnish reports of their proceedings.

The most notable addition to this column, especially from the scientific standpoint, is the report of the proceedings of the Washington University Medical Society. This body is composed of the professors and teachers in the medical department of Washington University. At its monthly meetings the members present the results of their investigations, research work and experiments, all of which are of the highest scientific character. In each issue of THE JOURNAL there will be given an abstract of the papers read at the meetings and from time to time we hope to publish some of the contributions in full.

We congratulate the members that their Journal has been made the medium for announcing the highly interesting work performed by the faculty of Washington University Medical School, thus, giving our members first-hand information of the important undertakings that are constantly being prosecuted at this school; and we are especially gratified with the opportunity of fostering in this manner the spirit of affiliation and cooperation which should pervade the entire profession in the state.

URODONAL, A FRENCH PROPRIETARY

We have before us an advertising circular for Urodonal, a proprietary which has been widely exploited in France and which, it appears, is now to be exploited in this country. It shows that the shot-gun proprietary is as much at home in France as it is with us.

Urodonal is stated to be "Prepared by J.-L. Châtelain, Pharmaceutical Chemist, Formerly Chief Chemist in the Paris Hospitals and Principal at the Laboratory of the Paris Hospitals." It is "For All Who Suffer From Arthritis, Rheumatism, Arterio-sclerosis, Renal and Biliary Lithiasis, Headache, Gout, Gravel, Lumbago, Sciatic Pains, Neuralgia and all Uric Acid Troubles," and to have been "Adopted by the French Admiralty (Ministère de la Marine) with the approval of the Board of Health"—indicating that in France high authorities do not hesitate to lend their names to proprietary exploitation. Urodonal is said to be "a granular effervescent preparation based on methylglyoxalidine (Lysidine), quinate of diethylene-diamine (Sidonal) and hexamethylene-tetramine (Formin, urotropine)." A chemical formula is also provided, which consists of the structural formulas

of lysidin, sidonal and hexamethylenamin united by plus signs. The circular assures us that "It is well known that lysidine combined with uric acid forms a highly soluble urate. Quinate of diethylene-diamine is by far the most active salt of piperazine (Prof. Albert Robin). The fact of combining these two salts in Urodonal, in strictly determined proportions, and in the presence of special products, gives this preparation very considerable power in dissolving uric acid. In fact, Urodonal is *five times more active than piperazine, and thirty-seven times more active than lithia*. We are, therefore, entitled to say that no other eliminator of uric acid can be compared with it." The language of the circular does not inspire confidence, and reference to New and Nonofficial Remedies makes one still more skeptical, for not only do we fail to find Urodonal, but we also learn that the Council has little faith in the claims as regards the uric acid solvent powers which are made for such bodies as piperazine, lysidin and sidonal. Continuing our inquiry by consultation of the Council on Pharmacy and Chemistry's book "Useful Drugs," we find the statement that the use of hexamethylenamin has practically been abandoned as an agent to increase the elimination of uric acid, and that this book, which treats only of the more valuable drugs, does not even consider the salts of lithia.

The extravagant language in the circular is sufficient to condemn this preparation in the mind of intelligent practitioners, so we do not anticipate that it will ever have the vogue that attached to the "ethical specialty" Cystogen-Lithia or the "patent medicine" Jad salt during the "dark ages" of medicine when a venal medical press advertised anything that was offered—at any rate not in Missouri.

OBITUARY

GEORGE FLEET DUDLEY, M.D.

Dr. George F. Dudley, one of the oldest physicians in St. Louis, died at his home in that city, February 1, after a brief illness, aged 79. Dr. Dudley was a native of Virginia and studied medicine in St. Louis, graduating from the St. Louis Medical College, now the medical department of Washington University, in 1863. He joined the Confederate forces at the outbreak of the Civil War, serving on the medical staff; was coroner of St. Louis for two terms and was the first physician to be appointed as health commissioner, which office he held under Mayor David R. Francis, at the time that the separation of the government of the city of St. Louis from St. Louis County was accomplished. He was an Honor member of the St. Louis Medical Society and a member of the Missouri State Medical Association.

LEANDER F. MURRAY, M.D.

Dr. Leander F. Murray, Holden, one of Johnson County's ablest and most respected physicians, died at his home, March 21, aged 67 years. He was a graduate of Louisville Medical College, 1876, and was a member of the Johnson County Medical Society and the Missouri State Medical Association. In 1913 Dr. Murray was elected to honorary membership in the Johnson County Medical Society. He was a valued contributor to the medical journals, and his professional library was one of the best in this section of the state. In 1882 he was appointed local surgeon for the Missouri Pacific and later for the Missouri, Kansas and Texas; he was a member of the National Association of Railway Surgeons, was county coroner two terms, and a member of the board of managers of the Nevada State Hospital, having been appointed by Governor Folk. He served several terms on the Holden school board, and as a mark of respect the schools were dismissed on Monday morning; a director in the Farmers and Commercial Bank. The banks were also closed during the funeral services. He was an active member of the Masonic lodge and the Royal Arch chapter. He was noted for his uncompromising attitude on the things which it has been said that "every physician does every week of his practice." The old-timers, those who knew him best from watching his career, knew that he was honest and square, and in the last analysis that is one of the highest compliments that can be passed on mortal man.

NO CERTIFICATES WILL BE REQUIRED WHEN PURCHASING TICKETS TO JOPLIN MAY 12, 13, 14 FOR THE ANNUAL SESSION. THE FARE WILL BE TWO CENTS PER MILE EACH WAY.

NEWS NOTES

Dr. L. P. WOODWORTH of New Madrid was reported ill March 16.

Dr. C. B. FRANCISCO of Kansas City will be in Europe for several months visiting the medical clinics.

Dr. CHARLES VILAS MARTIN of Maryville was operated on recently for mastoid abscess. He is making a good recovery.

Mrs. ROBERT H. FINLEY, wife of one of our members at Cuba, Crawford County, died from pneumonia, March 29.

PLANS for beautifying the hospital grounds about the General Hospital at Kansas City are under consideration by the Hospital Board.

THE bill providing for the erection of a hospital for infectious diseases at St. Louis has passed the General Assembly and been signed by the mayor. Construction will begin at once.

ST. LUKE'S HOSPITAL, St. Louis, has just opened its new addition of seventy-five beds. This, with other improvements recently made at a cost of \$200,000, gives the hospital a capacity of 175 beds.

DR. WALTER MCN. MILLER of Columbia, Secretary of the State Tuberculosis Society, gave an illustrated lecture on Tuberculosis in the auditorium of the high school at Joplin on March 16, and delivered a similar lecture at Springfield March 18.

BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY has made application to the Circuit Court of St. Joseph for a pro forma decree of incorporation. Dr. Joseph J. Bansbach is president, Dr. W. F. Goetze is secretary and Dr. J. M. Bell is treasurer.

DR. WALTER M. CROSS, a member of the Jackson County Medical Society, the city chemist of Kansas City, was badly burned about the face, hands and arms in the experimental laboratory by an explosion. His condition is not dangerous, though the burns are quite severe.

HOWELL County and Greene County Medical Societies have arranged to exchange essayists. At the April meeting of Howell County Society Dr. Joseph W. Love of Galloway will read a paper. This is an excellent method of bringing the members of nearby counties into close relation with each other.

DR. LEO C. MUDD, a former member of St. Charles County Medical Society, has been promoted from first lieutenant to captain in the Medical Corps of the United States Army, stationed at Fort Armstrong, Honolulu, Hawaii. Dr. Mudd is a graduate of St. Louis University Medical School, 1909, and served two years as intern in the City Hospital in St. Louis.

DR. M. G. SELIG of St. Louis received an invitation to become a member of the surgical staff of Mt. Sinai Hospital, one of the largest institutions of its kind in New York City. After practically deciding to accept the position, which is one that confers distinction on the incumbent, the consequent breaking up of family ties impelled him to decline the honor.

THE School of Medicine of the University of Missouri has been retained in Class A plus by the American Association of Medical Colleges. The school gives only the first two years of the

medical course, but its work is accepted at full value in all medical schools. The only other school giving a two year course that obtained this distinction is the University of Wisconsin.

THE site for the Noyes Hospital at Columbia, the fund for which was bequeathed by the late Charles W. Noyes, has been selected at the northeast corner of Twenty-Fourth and Jones streets. The site has a frontage of 180 feet by 140 feet, with a depth of 165 feet. It will be a public hospital but the trustees have not decided whether it will be wholly on a charity basis.

DR. HORACE C. LLOYD of St. Louis, charged with obtaining by false pretense the signature of Mrs. Minnie Lenhardt to a deed of trust for \$48 on her home in Luxemburg, St. Louis County, was held in \$800 bonds for the grand jury in Court of Criminal Correction No. 2. Judge Clark was disqualified to sit in the case because of alleged prejudice against Lloyd. He appointed Attorney Lee Meriwether to preside in his place.

CIRCUIT JUDGE THOMAS C. HENNINGS of the juvenile court of St. Louis has appointed Dr. Lister Tuholske and Dr. H. J. Scherek medical attendants on the court to examine and pronounce on the physical condition of juvenile offenders. Judge Hennings has become convinced that the removal and correction of physical defects will in many instances tend to abate the perverse conduct of the class of youths brought to the court.

THE campaign to raise funds for the Mt. St. Rose Hospital at St. Louis ended in the subscription exceeding \$150,000. This hospital is devoted exclusively to the care of tuberculosis patients in all stages. The executive committee in charge of the campaign announced that all expenses of the undertaking would be borne by the members of the committee and all money collected would be presented to the hospital. It is usual in such campaigns to deduct the expenses from the amount collected and therefore the action of the executive committee in this campaign has received unstinted praise. The expenses will amount to about \$9,000.

THE Kansas City Hospital Improvement Association has been organized. The object of the Association is to discuss matters of interest to those intrusted with the care of the hospitals of Kansas City and to devise a better system of cooperation between the various hospitals. The members of the Association at present are Mr. A. C. Stowell, St. Luke's Hospital, president; Drs. R. E. Castelow, superintendent of the General Hospital, secretary; Fred L. Woodell, super

intendent of German Hospital; J. Archie Robinson of Wesley Hospital; S. C. Fox, Missouri Pacific Hospital; Rev. A. W. Linquist, superintendent of Swedish Hospital; Noad Adams of the Baptist Hospital, and J. W. Perkins of the University Hospital.

SOME time ago we referred to Senator Oliver's Pittsburgh journalism and the large number of advertisements to which reasonable objection may be made on the grounds of health. Recent issues of the *Chronicle Telegraph* and the *Gazette Times* contain the following announcement:

"In order to make its business policy harmonize with its editorial utterances, the *Gazette Times* (or the *Chronicle Telegraph*) will hereafter neither seek nor accept advertisements of intoxicating liquors. All existing liquor advertising contracts will be canceled if possible; those that cannot be canceled will not be renewed on their expiration."

This is good news—so far as it goes. It is one result of Billy Sunday's visit. We congratulate Senator Oliver and his editors.—*Collier's*.

DURING March fifty-two internes were appointed to serve at the City Hospital in St. Louis. Of these, thirty-four are from St. Louis colleges, as follows: Twenty-one from St. Louis University, four from Washington University, eight from National University, one from College of Physicians and Surgeons. The eighteen appointments from schools out of the state consist of three from the University of Texas, six from the Northwestern University, six from Rush Medical College, and three from Tulane University. Forty-one applicants from colleges outside of Missouri took the examination and thirty-seven from St. Louis colleges. According to a ruling of the board before the examinations were given, two-thirds of the applicants to be appointed must be graduates of St. Louis colleges. Hence, some of the appointees from St. Louis colleges made lower grades than graduates from out of state colleges who were not appointed. In the event of vacancies, however, the appointments will be made from the highest grades irrespective of the location of the school. All the students from Washington University and St. Louis University who took the examination secured appointments.

THE graduates of the old Kansas City Medical College of the class of 1894 celebrated the twentieth anniversary at a reunion in Kansas City recently. About fifteen members of the class were present, Oklahoma, Washington, Kansas and Missouri being represented. A humorous vein was injected into the gathering by the appearance of Dr. Jefferson Davis Kernodle of Hickmann Mills, Missouri, who disguised him-

self as a farmer and appeared with overalls concealing his street clothes, and a false beard. Few of his classmates recognized him, but Dr. Gordon A. Beedle finally penetrated his disguise. Among those present were, B. H. Wheeler, Gordon A. Beedle, N. O. Harrelson, Thomas Field, George Hashinger, E. L. Chamblis, Stephen Ragan, T. W. Overall of Kansas City, F. Kirkpatrick and A. M. Kirkpatrick of La Harpe, Kan.; Charles Craeger of Lone Jack, O. C. Thomas of Springhill, Kan.; T. W. Neptune of Salina; A. J. Smith of Leavenworth, J. F. Rees of Spanaway, Wash.; R. S. Kellar of Freeman, Mo.; J. T. Robertson of Cabool, Mo.; C. O. Cranston of Madison, Kan., and J. L. Otterman of Kansas City, Kan.

A READER of ours out in Bourbon, Ind., sends us a copy of the *News Mirror*, published in his town. This contains one paid advertisement and five advertisements that masquerade as news items, all celebrating the miracles of W. J. Crozier, alias Dr. Croziero, "the Spanish Specialist, coming on a flying trip of mercy." The doctor puts up at hotels along his line of march and has free consultations with anybody suffering from anything. Before he reaches a town, however, he starts his press campaign working off testimonials to his medical powers. By this time "the Spanish Specialist" has departed from Bourbon; just where he is to-day we do not know. Indiana people, however, may be interested to know that this itinerant quack has one "record" that he is not advertising. Last October he was arrested in Paw Paw, Mich., for illegal advertising. He pleaded guilty and was fined \$50. The officials of Michigan have made it too hot for him to continue "practice" in that state. Back in 1911 "W. J. Croziero, Spanish Specialist," was quacking loudly in the smaller towns of Missouri. Indiana newspapers will do well to think twice before accepting this impostor's advertising, and anyone prejudiced in favor of health is advised to consult some one other than the Spanish Specialist.—*Collier's*.

THE St. Louis Society of the Medical Reserve Corps, U. S. A., held their third annual dinner at University Club, March 12. The occasion was made notable by the presence of Major Clyde S. Ford, U. S. A., who addressed the gathering on personal observations in the Balkan War, illustrating his talk with numerous photographic reproductions thrown on the screen. Major Ford was decorated by their majesties, the king and queen of Bulgaria, and by the sultan of Turkey, for his part in the administration of the medical work in the Balkan war. He was also honored by a medal from the Bulgarian Red Cross Society and recently honored by a medal from the American Red Cross Society, presented by President Woodrow Wilson.

Major J. M. Kennedy entertained the members in a most fascinating manner by his talk on "The Function of the Army Surgeon in the Time of Disaster, with Personal Reminiscences of the Earthquake at San Francisco."

Colonel Thomas U. Raymond gave a most entertaining description of the founding of the army school, research work, service in the Philippines, and reminiscences of an army officer.

Dr. A. M. Ravold gave the toast, "The Surgeon General," in which he described the remarkable achievements of Surgeon General Gorgas.

Lantern slides from army medical headquarters, loaned by Major D. C. Howard, were exhibited.

Since publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R." Those accepted during the current month are made prominent by the use of italics:

Typhoid Vaccine, Immunizing (H. M. Alexander & Co.).

B. B. Culture (B. B. Culture Laboratory).

Amphotropin (Farbwerke Hoechst Co.).

Trypsin (Fairchild Bros. & Foster).

Thiocol, Syrup Thiocol, Roche (Hoffman-Laroche Chemical Works).

Phenolsulphonephthalein, H. W. & Co.; *Phenolsulphonephthalein Ampoules*, H. W. & Co. (Hynson, Westcott & Co.).

Cerolin (Merck & Co.).

Anti-Anthrax Serum, Mulford; *Antistreptococcus Serum Scarlatina*, Mulford; *Disinfectant Krelon*, Mulford; *Salicylos*; *Staphylo-Serobacterin*; *Strepto-Serobacterin*; *Typho-Serobacterin* (H. K. Mulford Co.).

Tetanus Antitoxin, Squibb (E. R. Squibb and Sons).

Thiocol and Syrup Thiocol, Roche, readmitted to N. N. R. The advertisements of *Thiocol and Syrup Thiocol, Roche*, to the public in the form of *Sirolin*, having been abandoned here and abroad, the Council has readmitted *Thiocol and Syrup Thiocol, Roche*, to New and Nonofficial Remedies (see above).

MEMBERSHIP CHANGES IN MARCH

NEW MEMBERS

Asbury, L. M., Mareline.

Bingham, Junius W., Pottersville.

Box, Ernest M., 322½ S St., Springfield.

Cone, Marcus L., Campbell.

Cook, E. F., 710 Felix St., St. Joseph.

Cooper, Calvin L., 4601 Independence Ave., Kansas City.

Drace, Charles C., Holecumb.

Egbert, T. H., Kennett.

Farmer, Andrew J., Hartville.

Gilliland, Oliver S., 47th St. and Troost Ave.,

Kansas City.

Hamilton, Howard A., Drynob.

Harrison, A. S., Clarkton.

Harrison, E. F., Clarkton.

Latimer, Benjamin E., Hartville.

Leisure, Elmer A., 710½ Felix St., St. Joseph.

Martin, R. E., White Oak.

Milne, Lindsay S., 816 Rialto Bldg., Kansas City.

Morrow, B. E., Columbus.

Polk, David T., Excelsior Springs.

Postlethwaite, Frank M., North Kansas City.

Rice, James W., Berlin.

Strickland, W. R., Galt.

VanCleve, John D., Malden.

Vanoy, Levi T., Norwood.

Williams, Robert F., Baker Blk., Springfield.

CHANGES OF ADDRESS

Craven, J. H., Bowers Mill to Sarcxie, Mo.

Epler, J. W., Hollenberg, Kan., to Sheldon, Mo.

Ewell, William D., Springfield to Fair Grove, Mo.

Farr, George E., Novelty, Mo., to Gordon, Nebr.

Pierce, Harry M., St. Louis, to 500 W. 111th Street, New York City.

Reeves, G. W., Japan to Steelville, Mo.

Rutherford, Orra L., St. Louis to Bellflower, Mo.

Sanders, C. E., Kenoma to 2510 Emerson Avenue, St. Louis.

Wiley, W. H., Ridgeway to Westboro, Mo.

Woolis, Asa L., King City to Darlington, Mo.

REINSTATED

Kuper, George H., 5222 N. 20th St., St. Louis.

Wild, Frank, 3600 N. 14th St., St. Louis.

DEATHS

Loftus, Wm. V., 5904 Minerva Ave., St. Louis.

Murray, L. F., Holden.

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CORRESPONDENCE

NEWSPAPER THERAPY UP TO THE MINUTE

To the Editor:—The following clipping relating a most unusual occurrence and the first instance on record no doubt where a serum treatment was attempted to counteract poisoning by a vegetable drug, appeared recently in the *Kansas City Star*:

"FIGHTS FOR LIFE AGAINST POISON

"Serum made from the poisonous jequirity beans, one of which Samuel D. Workin, a New York School of Pharmacy senior, chewed and swallowed Thursday, is being injected by his physicians in an effort to save the student's life. The serum was prepared by a wholesale drug house that manufactures an essence from the bean for diseases of the eye."

The Kansas City Drug Club inquired into the matter and received the following report:

COLUMBIA UNIVERSITY

COLLEGE OF PHARMACY OF THE CITY OF NEW YORK

115-119 W. 68th St. Office of the Secretary
March 28, 1914.

Mr. Albert N. Doerschuk, President K. C. Drug Club, 432 Westport Ave., Kansas City, Mo.

Dear Sir:—In reply to your letter of March 25, I have to say that the statement made in the clipping herewith is entirely without foundation. No serum was administered to the young man whatever.

Very truly yours,
W. BOEMPIC, Secretary.

INDEX WORK FOR PHYSICIANS

To the Editor:—The Index Office sends you the accompanying announcement of its organization and the services it can furnish, especially to physicians. A notice of its organization will be gratefully appreciated.

Yours truly,
AKSEL G. S. JOSEPHSON, Secretary.

The Index Office, which has recently been established in Chicago, intends to make a specialty of serving the medical profession by undertaking to supply exhaustive or selected bibliographies of medical subjects; translations or abstracts of articles or monographs; copies, photographic or otherwise, of manuscript, printed or illustrative material.

Special attention will be paid to discretionary research and investigations in the libraries of Chicago and other cities.

The office also intends to bring investigators in touch with the work of others in the same line of research.

Located in the city of great libraries, the office will be in position to undertake quite extensive investigations without going outside the locality of its headquarters. It is the intention of the board of trustees, however, to establish connections in the other great library centers of the world.

Dr. Bayard Holmes, surgeon and medical writer, is president of the office. Aksel G. S. Josephson, cataloguer of the John Crerar Library, is secretary and directing officer. The office is located at 31 West Lake Street, Chicago.

SOCIAL HYGIENE

To the Health Officer:—No doubt you have received from time to time and from various sources requests for the following information. If you have prepared a general statement covering this field of inquiry, I would greatly appreciate a copy of the same. If you have not done this, could you kindly find time to send me a letter covering these questions?

1. What is being done toward securing the reporting of venereal diseases? Has this question been under discussion by the health board? And are there any ordinances relating to it?

2. Is there any organized effort to provide advice relative to these diseases, as is done in the case of tuberculosis? And is your department equipped for furnishing laboratory assistance in diagnosis to physicians?

3. Does your city, county or state provide hospital facilities for venereal infection cases?

4. Have you issued any literature on these diseases for public distribution? Could you send three copies of each such publication to this association?

5. Has any attempt been made to teach sex hygiene in the public or private schools? And what is your judgment as to the success of such attempts?

6. Any suggestions relative to furthering the campaign against venereal diseases and promoting a higher standard of morals in the sex relations of men and women will be greatly appreciated, as the National Association seeks to become a clearing-house for authentic information as to what is being done throughout the country in this field.

Very truly yours,
WILLIAM F. SNOW, General Secretary.
105 West Fortieth Street, New York City.

MISCELLANY

NEW LICENTIATES

The following applicants for licenses to practice in Missouri successfully passed the examination before the State Board of Health March 9, 10, 11:

Lavernia Airis, Catawissa, Mo.; O. F. Baerens, St. Louis; J. A. Bellamy, Bellflower, Mo.; William D. Berry, Muskogee, Okla.; V. P. Blair, St. Louis; Amin Boutros, St. Louis; George Cerney, St. Louis; Henry Dalton, St. Louis; E. T. Davis, Kansas City, Mo.; F. K. Doane, St. Louis; R. H. Ferguson, St. Louis; N. S. French, Republic, Mo.; Mont M. Hamlin, St. Louis; W. W. Hendricks, Bardolph, Ill.; D. F. Hochdoerfer, St. Louis; M. R. Johnston, St. Louis; J. F. Jolley, St. Louis; George E. Krapf, St. Louis; Emery Lamphear, St. Louis; Charles

C. Lee, St. Louis; E. B. Le Saulnier, Pacific, Mo.; M. D. Levy, St. Louis; H. C. McIntire, St. Louis; Ralph McReynolds, St. Louis; H. J. Morins, St. Louis; C. A. Newcomb, St. Louis; Thomas H. Odeneal, Jackson, Miss.; William H. Olmsted, St. Louis; L. R. Padberg, St. Louis; W. L. Post, Drexel, Mo.; F. A. Priessman, Basco, Ill.; F. H. Rosebraugh, St. Louis; P. H. Scherer, St. Louis; M. L. Seng, St. Louis; H. A. Uhlemeyer, St. Louis; C. F. Vohs, St. Louis; C. K. Weller, St. Louis; D. S. Woodward, St. Louis.

SEX EDUCATION

Attention has been widely called of late to the necessity of instructing our adolescent boys and girls in the matters relating to sex. A great change of public sentiment on this question has taken place in the past few years, and nearly every one now believes that these matters should be dealt with in the open, and that our children should not be left in ignorance about organs and functions that play so fundamental a part in the life history of each individual and in the drama of human society. The old habit of relegating to a dark, unwholesome, silent corner everything relating to sex, has, happily, given way to a more sensible, safe and Christian practice of facing the dangers, dispelling ignorance and providing the child with the knowledge that will enable him, if he will, to lead a pure and normal life. But while all now agree that this instruction should be given, there are still differences of opinion as to who should give it. Some say parents, some, the Sunday school, or the church, some, the public school teacher. In view of these differences of opinion we fear many children are missing the instruction altogether, just because one class or institution lays the duty off onto another and so it is a task that is assumed by none.

Now, there is no general rule that will cover all cases. It is undoubtedly best of all when the parents can take this matter up with their children—the father with his boys, the mother with her daughters. This is the natural thing and who should be better fitted to do it than the parent if there exists that intimacy, that wisdom, and that love which should characterize the sacred relationship of parent and child. Ah, in that “if” the rub comes. Sad indeed, it is, but too true, that this intimacy, wisdom and love often exists only in theory; and when this is the case the solemn obligations and duties belonging to parenthood have to be left undone, or be done by others. This is why it often becomes necessary for the church, through its Sunday school, or for the public school, through its teachers, to take up this matter.

It is a question that vitally affects citizenship. Therefore we contend that it is the duty of public

schools, through the teachers, to find out by questioning the individual child, whether the subject has been properly presented to him by any qualified grown person, and if not, to see that he is informed of those things which all should know about; a matter so vitally affecting the well-being of society and the individual.—*Education*.

PANAMA-PACIFIC INTERNATIONAL EXPOSITION WILL DISPLAY ACHIEVEMENTS OF EUGENIC SOCIETIES

Among the features that will make the Panama-Pacific International Exposition unusual in the history of such world events, which will in fact render it absolutely unique, will be the exhibits in eugenics and in sex and mental hygiene. The exposition will be larger, grander and more inclusive than any that have gone before, but in the exhibits named it will be the pioneer and actually the first to present to the world the epochal achievements in a line of endeavor that but a few years ago was looked on as utopian or the chimera of over-imaginative brains.

“In a very important sense,” says Mr. Alvin E. Pope, chief of the exposition’s department of social economy under which the exhibits in eugenics and mental and sex hygiene will be displayed, “this department of activity is of the greatest importance to humanity, of all the subjects or products which the Exposition will discover to the world, when the completion of the Panama Canal is celebrated in 1915.”

The National Sex Hygiene Association will be represented at the exposition in an exhaustive exhibit. The National Committee for Mental Hygiene will present a full display of the results of its work.

The government’s operations in the same field of endeavor will be seen as developed under the bureaus of plant and animal industries, in the first of which the laws of heredity are studied and in the second, eugenics.

Singularly enough, the study of man, recommended by Pope as the proper study of mankind, is governmentally prosecuted under the auspices of the Federal Department of Agriculture. From the contemplation of plants, biologists pass naturally to the study of man, and the activity of the government in the conservation of the animal industry of the country leads naturally to the study of man as well. Hence, man is embraced in governmental concern as exhibited in its Bureau of Plant Industries and its Bureau of Animal Industries, both of which will be adequately represented at the exposition which is to celebrate the completion of the Panama Canal.

"Thus far," says Mr. Pope, chief of the Department of Social Economy for the Exposition, "most of all of the work done by any of the four forces engaged in the betterment of humanity, has been of a negative quality. I mean that what has been accomplished is directed to the prevention of the persistence in the race of defectives, the feeble-minded and criminals. To clear the race by eliminating its diseased and decayed elements is the first great step to be taken. Later will come effort at improvement. To prevent the birth of incompetents will rid the world of such in a single generation. To improve the race by the proper instead of the promiscuous marriage of physically and mentally un congenial pairs will be a step for the future to negotiate. However, it is proposed that the exhibits in the Department of Social Economy will reveal the negative, or preventive, work that has been accomplished, and also the positive achievements in behalf of that chief object of mankind's interest and concern—Man."

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RADIUM IN CANCER CASES

While radium has been employed in the treatment of cancer for many years, it has come into special prominence recently owing to the enthusiasm of some of the men who have been using it. Their enthusiasm has produced among many persons an exaggerated idea as to its possibilities.

Among men familiar with the subject there is very grave doubt at present as to whether radium does anything more for cancer than can be done by the x-ray. In certain cases, as in those where the mouth or throat are affected, radium can be employed to much greater advantage because of the facility with which the agent can be brought in contact with the diseased part.

In their early stages the majority of cancers can be completely and permanently eradicated by surgery, and where this is possible medical men almost unanimously agree that it is the method of choice. In some instances, however, and particularly in cancer involving the face, where the result is important from a cosmetic point of view, radium or the x-ray often may be employed with exceedingly satisfactory results. In a second class of cases, where the malignant process has extended so far that surgery can offer no hope, radio-therapy may prolong the life of the patient or afford much relief from pain and suffering. The same holds true in certain types of cancer, large celled sarcomata for instance, where operative procedures are of little or no avail. And again, in certain selected cases, the use of these

agents following an operation, particularly in cancer of the breast, often is beneficial.

The changes produced by radium on living tissue are not clearly understood. We do know, however, that this agent, like the x-ray, has a selective action on cancerous and other abnormal growths, and that under its influence these structures break down and disappear before contiguous normal tissue is affected by the mysterious agent.

Like other powerful remedial agents, radium has its dangers as well as its advantages. Occasionally extensive burns follow its use, and these lesions are exceedingly slow and difficult to heal. In unskilled hands radium is capable of doing much more harm than good. As a matter of fact, it is not likely to fall into unskilled hands for some time to come, inasmuch as at least \$15,000 worth of radium bromid, the salt generally employed, is required to accomplish any practical result.

There are two radium institutes in the world to-day; one is in Paris, and the other, founded by King Edward VII, is in London. Radium experiments conducted at the Johns Hopkins University in Baltimore have been given widespread publicity in the United States during the past two months.

It must not be assumed that radium is a cancer cure; indeed, so far, the burden of proof seems to be that it is not. There are certain ultra-malignant types of the disease which neither radium, surgery nor the x-ray can cure. Early diagnosis and the immediate institution of appropriate treatment are the most important elements in the eradication of cancer. No medical "cure" for cancer has ever been discovered. The "cures" advertised by quacks are worse than useless. They may prevent a patient from going to a competent man for proper surgical or x-ray treatment until too late.—*Kansas City Star*.

OUTLINE FOR CONTROL OF TUBERCULOSIS

SUMMARY OF RECOMMENDATION BY THE COMMITTEE ON JANITOR SERVICE; DEPARTMENT OF SCIENCE INSTRUCTION NATIONAL EDUCATION ASSOCIATION, JULY, 1913

To standardize janitor service, or school house-keeping, the first step is to get the facts. Every building, as every room in it, has its own conditions to be learned and controlled.

This can be done with least expense and greatest effectiveness by enlisting pupils' cooperation. Expense is negligible. Effectiveness is along three lines: 1. Practically constant supervision which good housekeepers find indispensable; 2. permanent records of sanitary details in place of guesses and opinions; 3. interest of future voters and home makers in such details by practice in regulating them.

HEALTH OFFICERS

Appoint a group of health officers in each classroom, for a period so limited that each child has service once a year. Credit their work to "physiology and hygiene," or "nature study," "domestic science," physics, chemistry, biology.

TEMPERATURE

Health officers shall read thermometers hourly, record readings in a substantial book, chart them (e. g. nurses' clinical charts) on a blackboard reserved for it, where pupils, principal, janitor and visitors can see perhaps a week's record at a glance. When conditions permit they shall readjust heat sources, ventilators or windows to secure proper temperature which, when artificial heat is used, should never exceed 68 degrees Fahrenheit. Pupils over eight years of age can do this; sometimes younger.

CLEANLINESS

Cleanliness of washbowls, waterclosets, and of any other part of building or yard should be recorded once each session. Dirt on windows sometimes diminishes illumination one-quarter to one-third, measured by a photometer. The instrument is costly, and until a less expensive method is devised the opinion of health officers can be given. Dirty windows are important in rooms badly ventilated or specially exposed to smoke and dust. Such windows sometimes need washing once in two weeks. Pupils over eleven, possibly younger, can do this reporting.

GENERAL SUGGESTIONS

Health officers from older grades can be appointed for rooms where pupils are too young for any special detail.

When a fault is found beyond pupils' function to remedy, it should be reported immediately to the proper authority, probably the principal. It is wise never to "interfere with the janitor." This report and the result following should be stated in "Health Officers' Permanent Records."

For other than classrooms and for corridors groups can be specially appointed, their duties being suitably modified.

Some, if not all of these exercises in practical sanitation can be undertaken quietly at any time by any teacher in charge of any room. One or the other is already proved practicable in individual schools within the last ten years. The accumulated data will be invaluable. It is the practical first step in reducing "school diseases," including tuberculosis, which increases all through school years (except in open air schools), and among teachers has a mortality rate higher than among the general public.

These facts will help demonstrate that school housekeepers, like others, must be trained in sanitary methods. Janitors' salaries and their supervisors' often equal and sometimes exceed salaries of teachers, principals and other trained workers whose responsibilities are no more seri-

ous, and who are carefully prepared and tested before appointment.

COURSES FOR PHYSICIANS

In order to attract the attention of physicians to the post-graduate studies at Washington University Medical School, the dean has sent the following letter to the alumni. It is published here so that all our members may learn of the increased facilities at this institution for giving courses to physicians:

St. Louis, March 17, 1914.

Dear Doctor:—As you will see from the announcement sent you under separate cover, the Medical Department of Washington University is making every effort to offer attractive post-graduate courses.

Under the reorganization of the Medical School which occurred a few years ago, it has now adequate means and facilities to meet the desires of the alumni in this direction, and the University is very desirous of obtaining their active cooperation and assistance in promoting this department.

The new Medical School buildings and the Barnes Hospital will be ready for occupancy during the summer of 1914 and we believe you will find it greatly to your advantage and pleasure to pay your alma mater a visit. We assure you that every effort shall be made to make your visit pleasant and profitable. The medical library of Washington University contains 15,000 volumes and offers every facility for study.

We have arranged special courses on many subjects for post-graduate study and we hope one or more of them will attract you or your professional friends. The fees do not exceed the expenses of giving the courses. These courses are offered with the purpose of extending the facilities of the Medical School to physicians who may wish to make use of them.

We write you this letter to enlist your cooperation and loyalty, and we hope that in the near future we will have the pleasure of demonstrating to you the possibilities of our clinics, laboratories and teaching facilities.

With kindest regards and best wishes, I am,
Sincerely yours

E. L. OPIE, Dean.

The announcement contains full information of the scope of the courses, the hours and fees, but lack of space prevents our publishing more than a summary. The sessions for post-graduate students will begin June 1, 1914 and end July 1, 1914. The following courses are offered:

MEDICINE. — (A) Internal Medicine. — Professor Robinson and Dr. A. E. Taussig. (B) Internal Diseases with External Manifestations. — Professor Dock. (C) Clinical Chemistry and

Microscopy.—Professor Robinson and Dr. Lissner. Dermatology.—Professor Engman and Dr. Mook.

SURGERY.—(A) General Surgery.—Professor Murphy, Dr. Sachs, Dr. Fisher and Dr. Brooks. (B) Surgical Pathology.—Professor Murphy, Dr. Sachs, Dr. Fisher and Dr. Brooks. Genito-Urinary Surgery.—Dr. Caulk and assistants. Orthopedic Surgery.—Dr. Allison and Dr. O'Reilly. Ophthalmology.—Professor Ewing, Professor Alt and assistants. Otology.—Professor Shapleigh and assistants. Obstetrics.—Dr. Schlossstein and Dr. Vogt. Sero-Diagnosis of Pregnancy.—Professor Schwarz and assistants. Gynecology.—Dr. Crossen, Dr. Gellhorn and Dr. Taussig. Pediatrics.—The course in Diseases of Infants and Children will be given at the St. Louis Children's Hospital.—Dr. Veeder, Dr. Bleyer and Dr. Jeans. Pathology.—Professor Opie and Dr. Smith. Medical Bacteriology and Serology.—Dr. Thomas. Physiology of the Circulation.—Professor Erlanger. Mr. Gesell. Pathological Chemistry.—Professor Shaffer with the cooperation of members of the Department of Medicine.

GROUPING OF COURSES

In order that physicians who wish to take post-graduate instruction may select courses which will profitably fill the time available, the following groupings are suggested:

1. Mornings, Internal Medicine; afternoons, Clinical Pathology. Fee, \$50.

2. Mornings, General Surgery; afternoons, Surgical Pathology. Fee, \$50.

3. Mornings, Internal Medicine, General Surgery, Orthopedic Surgery or Pediatrics; afternoons, any one of the following specialties: Dermatology, Genito-Urinary Surgery, Ophthalmology or Otology. Fee, \$50.

4. Mornings and afternoons, Obstetrics and Gynecology. Fee, \$50.

5. Mornings, Pathology; afternoons, Bacteriology. Fee, \$50.

6. Mornings, Internal Medicine, General Surgery or Pediatrics; afternoons, Bacteriology, Medical Serology and Bacteriology or Physiology of the Circulation. Fee, \$50.

Each post-graduate student is required to pay at the time of registration a registration fee of \$5 and to make a breakage deposit of \$10. The breakage deposit will be returned at the end of the course after charges for breakage, if any, have been subtracted.

In order that courses may begin on June 1, it is essential that those who wish to take them register by letter or in person on or before Monday, June 1, 1914. For further information and copy of the announcement apply to the Registrar, Washington University Medical School, 1806 Locust St., St. Louis.

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SOCIETY PROCEEDINGS

MISSOURI STATE MEDICAL ASSOCIATION

Fifty-Seventh Annual Session, Joplin, May 12-14, 1914

PRELIMINARY ANNOUNCEMENT OF PROGRAM

Symposium on Heart Disease:

Cardiac Arrhythmia
.....P. T. Bohan, M.D., Kansas City

The Kidneys in Heart Disease.....
.....Leo C. Huelsman, M.D., St. Louis

Respiratory Rhythm in Heart Failure.....
.....Geo. H. Hoxie, M.D., Kansas City

Functional Affections of the Heart.....
.....Franklin E. Murphy, M.D., Kansas City

Treatment.....Chas. H. Neilson, M.D., St. Louis

The Use of the Electro-Cardiograph in the Study of Cardiac Conditions.....
.....G. Canby Robinson, M.D., St. Louis

Subject not announced...Bernice B. Barr, M.D., Clinton

Fracture and Treatment of the Patella.....
.....T. C. Boulware, M.D., Butler

Precancerous Skin Lesions, with lantern slide illustrations.....
.....Rudolph Buhman, M.D., St. Louis

The Treatment of Migraine.....
.....Given Campbell, M.D., St. Louis

Subject not announced...J. Q. Cope, M.D., Lexington

Status Lymphaticus and Status Hypoplasticus and Their Possible Relationship to Internal Secretions.....
.....Wm. W. Duke, M.D., Kansas City

Value of the Von Pirquet Test in Diagnosis and Prognosis of Pulmonary Tuberculosis in Adults.....
.....Walter Fischel, M.D., St. Louis

Subject not announced...S. A. Grantham, M.D., Joplin

Subject not announced.....
.....G. W. Hawkins, M.D., Salisbury

The Duffield Method of Resuscitation of the New-Born.....
.....T. Guy Hetherlin, M.D., Louisiana

Demonstration of Young Human Embryo, with lantern slide illustrations.....
.....Franklin P. Johnson, Columbia. (By invitation.)

The Perversions of Consciousness in Mental Diseases.....
.....S. A. Johnson, M.D., Springfield

The Medical Quack.....
.....R. Emmet Kane, M.D., St. Louis

What Knowledge Shall Be Imparted to the Laity Concerning Cancer.....
.....F. J. Lutz, M.D., St. Louis

Auto-Intoxication and Its Relation to Intestinal Indigestion.....
.....D. F. Manning, M.D., Marshall

Treatment of Diabetes...R. H. McBaine, M.D., St. Louis

Report of Case of Renal Calculi.....
.....Greene D. McCall, M.D., Fulton

The Early Recognition of the Clinical Significance of Gastric Disturbance.....
.....A. Jackson McNees, M.D., Clinton

The Application of Recent Experimental Work in the Treatment of Intestinal Obstruction.....
.....Fred T. Murphy, M.D., St. Louis

Joint Syphilis.....Archer O'Reilly, M.D., St. Louis

Subject not announced.....	.....Wm. R. Patterson, M.D., Warrensburg
Cervical Ribs.....	.....Caryl Potter, M.D., St. Joseph
Treatment of Neuralgia.....	.....G. Wilse Robinson, M.D., Kansas City
Intermittent Hydronephrosis .....	.....C. W. Russell, M.D., Springfield
Subject not announced.....	.....R. M. Schauffler, M.D., Kansas City
A Few Observations on Kidney Surgery.....	.....H. J. Scherck, M.D., St. Louis
Congenital Syphilis in Children.....	.....E. H. Schorer, M.D., Kansas City
The Interpretation and Localizing Value of Pares- thesia.....	.....S. I. Schwab, M.D., St. Louis
Some Factors in Surgery of the Stomach and Duo- denum.....	.....J. G. Sheldon, M.D., Kansas City
Local Anesthesia in Major Surgery.....	.....W. A. Shelton, M.D., Kansas City
Sprains.....	.....H. C. Shuttee, M.D., West Plains
Roentgenoscopy in the Right Lower Quadrant of the Abdomen, with lantern slide illustrations	.....E. H. Skinner, M.D., Kansas City
Unnecessary Poisonings .....	.....Ralph L. Thompson, M.D., St. Louis
Treatment of Fistula in Ano.....	.....E. H. Thrailkill, M.D., Kansas City
Cancer of Cecum at Site of Appendiceal Lesions..	.....Paul Y. Tupper, M.D., St. Louis
Upper Abdominal Explorations Under Local Anes- thesia.....	.....Elmer Twyman, M.D., Independence
Placenta Previa .....	.....Fred T. Van Eman, M.D., Kansas City
Extragastric Dyspepsia .....	.....I. J. Wolf, M.D., Kansas City
Subject not announced.....	.....A. W. Zillman, M.D., Keytesville

These are arranged alphabetically in the names of authors. The final program will be arranged later and present the order of delivery.

FIFTH ANNUAL MEETING OF THE MISSOURI SOCIETY MEDICAL SECRETARIES

ST. LOUIS, TUESDAY, MAY 13, 1913

Meeting called to order at 3 p. m. by Dr. T. O. Klinger, president, in the chair. Minutes of previous meeting read and approved. Report of the Committee on Badges was received and on motion the same was accepted and the committee discharged.

Dr. Alexander R. Craig, secretary of the American Medical Association, was introduced and promised to address the society at the banquet. Dr. F. C. E. Kuhlman, secretary of the St. Louis Medical Society, addressed the society and emphasized the advantage of system in performance of secretarial duties. Dr. Kuhlman exhibited the original minutes and transcripts of the St. Louis Medical Society from the date of organization to the present date. A general discussion followed after which the society expressed a vote of thanks to the St. Louis Medical Society through Dr. Kuhlman for their action in mailing their *Bulletin* to the county secretaries.

Dr. J. Franklin Welch, treasurer of the Missouri State Medical Association, gave us a short address on the necessity and advantages of system in our work and making reports to the state secretary.

Dr. R. M. Funkhouser, president of the Missouri State Medical Association, gave a splendid address in which he emphasized the importance of systematic

and enthusiastic secretaries. He reviewed the changes in the profession during the past ten years. The address was well received and Dr. Funkhouser closed by advising us that the proof that no medical trust exists rests largely on the medical men of which we are representatives.

Dr. A. H. Thornburgh of West Plains addressed the members. His subject, "Confessions of a Country Medical Secretary," was especially favorably received and brought out a very free and general discussion.

The following officers were then elected: President, Frank H. Matthews, Liberty; first vice-president, A. N. Bobbitt, Joplin; second vice-president, J. A. McComb, Lebanon; secretary and treasurer, John H. Timberman, Marston. Dr. Klinger then appointed the following executive committee: Dr. Wm. Nifong, Fredericktown; Dr. E. L. Hume, Bourbon, and Dr. F. H. Brown, Billings. The society then adjourned to the banquet at the University club.

Dr. Alexander R. Craig, secretary of the American Medical Association, addressed the society. His address not only appealed to us for its literary worth and the information it contained, but impressed us with Dr. Craig's personality.

Dr. W. S. Allee addressed the society on the subject of medical legislation. His keynote was, be sincere and honest, appeal to your senator and representative only in behalf of such legislation as will benefit the masses and not the classes, carried both instruction and conviction to all present and reminded us that in this able, conscientious man of learning and energy our association has a man of unusual attainments, willing to sacrifice time and efforts in behalf of principle.

Dr. E. J. Goodwin, secretary-editor of the Missouri State Medical Association, gave us some pointed, well worth while suggestions for improving conditions in our local societies.

Dr. Frank J. Lutz, chairman of the Judicial Council, in a few well chosen words, tried to explain to Dr. Allee in what esteem he was held by the medical profession of the state, and the appreciation of his services and attainments. At the conclusion of his remarks, in behalf of the association, he presented Dr. Allee with a handsome memorial watch.

Dr. Allee responded in feeling words of thanks. Dr. A. W. McAlester, Jr., of Kansas City, presented Dr. Allee with a memorial book containing letters of commendation.

Dr. Thomas O. Klinger, president of our society, read his paper by title on account of the hour being at hand when the president's annual address and orations on surgery and medicine were to be given.

JOHN H. TIMBERMAN, Secretary, Marston, Mo.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY—TWELFTH MEETING

Washington University Hospital, March 9, 1914

9. A CASE OF MULTIPLE BASAL-CELL CARCINOMA OF THE SKIN IN A YOUNG MAN.—

By DR. MARTIN F. ENGMAN

Cases of multiple carcinoma are always of great interest, not only to the clinician, but to the pathologist, as one realizes that there must be some widespread active factor which causes these lesions to spring up independently at various sites over the skin.

The present patient is only 32 years old. His father died of an unknown intestinal trouble; his mother during labor. There is no history of cancer in the family. The patient had pneumonia at the age of 22, and when he recovered he noticed a lesion on the right of the chin. This began as a small, pearly

nodule, which gradually increased in size until it was about one-fourth of an inch in diameter, when ulceration began. Two years elapsed from the time of its appearance until its ulceration. One year previous to the ulceration a similar nodule appeared on the tip of the nose. These lesions grew gradually, with now and then the appearance of new ones scattered over the face and neck.

When the patient came to the Barnard Free Skin and Cancer Hospital in January, 1912, his appearance was striking. Scattered over the chest, back and face, extending from the forehead to the waist line, both in the front and rear, were numerous lesions of various degrees of development.

The earliest lesions seemed to be small, reddish-purple, elevated nodules, very superficially placed in the skin, ranging from the size of a pin-head to about an inch in diameter. Some of the lesions were covered with a crust and seemed to be undergoing ulceration. Others had a cystic appearance. A number were small, shiny and lobulated. Others had undergone involution in the center, and showed a peripheral ring of raised, shiny nodules. Scattered here and there over the chest and arms were large, deeply pigmented and yellowish freckles. The nose had been partially destroyed and was covered with an ulcerated crust. The lip was drawn down by the scar of a former tumor and was well crusted and mildly ulcerated. The skin of the neck and behind the ears was thickly studded with nodules in various degrees of evolution. On close examination, one could perceive that the man had an anemic, atrophic, presenile skin over the whole body, especially on the forearms and backs of the hands.

Lesions of every type were excised and given to Dr. Loeb of the Barnard Free Skin and Cancer Hospital for microscopic examination. All of them were found by him to be basal-cell carcinoma.

On account of the crusted, impetigenous appearance of many of the lesions, auto-inoculation experiments were performed without result. Various transplants were made from one portion of the skin to another without results. It was pretty well determined by the study of the patient that no inflammatory process preceded the appearance of the carcinoma. It seemed to be just one of those cases where the basal-cell type has appeared independently in many places over the skin of the face and trunk.

The cause of this active growth is, of course, unknown. These little carcinomata are easily cured by excization. None of them so destroyed has relapsed.

During the experiments with colloidal copper at the Barnard Free Skin and Cancer Hospital this man received many injections and was one of the cases which seemed to improve. At any rate, the carcinomatous condition of the nose and several smaller lesions healed while he was under the colloidal copper treatment.

I will take the liberty of throwing on the screen some pictures of this man's appearance when he first appeared in the hospital, together with lantern-slides of the microscopic sections, and also some cases demonstrating the liability of presenile skin and senile skin to undergo carcinomatous degeneration. I also show a case, similar in some ways to the one exhibited, of multiple, benign, cystic epithelioma in a man of 40, where lesions were scattered particularly over the chest and back. The microscopic slides of this case show a carcinoma of the basal-cell type, but very mild and attenuated in its growth.

DISCUSSION

DR. LOEB: The microscopic sections of this case gave some interesting results. We studied very early lesions in serial sections and we found that the earliest lesion originated through the downgrowth of the papillae. At the tip of the papillae the nuclei decreased in size,

became richer in chromatin and more densely packed. Then the papillae grew downward, but often found resistance on the part of the underlying connective-tissue and were forced instead of growing downward to grow sideways or even outside into the air. The resistance of the connective tissue was too strong for the infiltrating power of the epithelial cells to overcome. In the end, however, the epithelium overcame this resistance and infiltrated the deeper tissues. We could, furthermore, show that this carcinoma did not take its origin from detached cell rests. We found frequent cyst formation and the cysts originated in this case probably as a result of edema due to interference with the circulation, the epithelial cells pressing on the blood-vessels. As a result of edema liquefaction of the connective tissue and epithelial cells was produced and cyst formations resulted.

10. A CASE OF RUPIAL PSORIASIS.—By DR. MARTIN F. ENGMAN

The case is presented on account of its rarity and the uniqueness of its clinical symptoms. This is a boy of 15, with no history of psoriasis in the family. He is well grown and appears healthy in every way. The disease began three years ago in the left axilla. The next lesion began in the left axillary region and spread from there over its present location.

As you see, the crusts are peculiar in that they are of a rather greenish tint and shell-like in appearance, firmly attached to the adjacent skin. The initial lesion begins in the follicle as a small scaly formation. The lesion then extends underneath the early crust, forming another crust; thus by successive waves of extension and the formulation of crusts, a cone-shaped crust is developed as one sees in rupial syphilis.

This is the second case I have seen. The other one occurred several years ago. In the former case I found the disease auto-inoculable. Auto-inoculations have been made in this case, but it is too early as yet to report on them. The blood, urine, kidney and stomach functions are found to be normal. From the blood has been grown a staphylococcus, but this must be an artefact. From the scales no micro-organisms have been recovered.

11. SARCOMA OF THE ROUND LIGAMENT OF THE UTERUS.—By DR. FRED J. TAUSSIG

The case reported was in a woman 44 years of age, vii para; last child four years ago. The symptoms were primarily those of the uterine prolapse, which was associated with the tumor. There was some pain in the lower abdomen, due to adhesions between tumor and intestines. The diagnosis before operation was right-sided solid ovarian tumor. Laparotomy at the Washington University Hospital on Oct. 30, 1913, revealed an ovoid, semi-solid tumor, the size of two fists, lying in front of the uterus, with normal tubes and ovaries to either side. The right round ligament could be seen entering at the base of the tumor about 1½ inches from the uterine horn. Owing to the apparent malignancy of the mass, the body of the uterus and the right adnexa were removed and the cervix fixed to the abdominal wall. Palpation of liver, spleen, intestines and lymphatics revealed no metastases. Recovery uneventful.

Microscopic examination showed a spindle-celled sarcoma with numerous cysts of endothelial origin, blood-vessels well developed indicative of slow growth; tumor covered by peritoneum.

A total of 141 cases of round ligament tumors collected showed that about two-thirds are extra-abdominal, appearing in the inguinal canal or labial fold. Only slight symptoms are produced. Seventy-nine out of 135 were fibromyomata, and a large number of these were associated with uterine fibroids. The percentage

of adenomyomata was strikingly large, there being thirty tumors of this sort.

Only five cases of sarcoma in addition to the writer's could be found. All of these showed relatively slow growth, were clinically benign and did not recur after removal.

DISCUSSION

DR. EUGENE OPIE: This tumor, which has grown slowly and is apparently encapsulated, resembles in gross a benign tumor. Histologically, it has some resemblance to the fibromata of the ovary, which have cells and comparatively little fibrous stroma. I believe that Dr. Taussig is correct in designating the tumor a sarcoma, but its slight malignancy, its resemblance in gross appearance and in clinical course to a benign tumor must be borne in mind. Dr. Taussig has pointed out that the sarcomata that have been previously described in the round ligament have had these characters.

12. THE EXPERIMENTAL PRODUCTION OF AN EARLY STAGE OF EXTRA-UTERINE PREGNANCY.—BY DR. LEO LOEB

In former experiments we have shown that it is apparently impossible to produce experimentally an extra-uterine pregnancy in the guinea-pig. Further investigation showed that we can produce experimentally a very early stage of extra-uterine pregnancy by making incisions into the upper part of the uterus about two and one-half days after ovulation. Under these conditions an ovum developed on the outside of the uterine wall directly in the peritoneal connective tissue. The development of the ovum is very much slower under these conditions than it would have been in the uterine mucosa, and it will presumably come to a standstill after a relatively short time.

In accordance with our previous experimental findings that only the uterine mucosa of the guinea-pig has the power to produce maternal placenta, all decidual reaction is absent in the peritoneal connective tissue. Only certain parts of the embryonal placenta formed but much of the trophoblastic tissue did not develop.

Of great importance is the resemblance which this structure bears to the structures which we found previously in the ovaries of about 10 per cent. of young guinea-pigs, and which we interpreted as young embryos which developed parthenogenetically in the ovary. Our new finding proves that this interpretation was correct. We may therefore state definitely that in a relatively considerable number of cases parthenogenetic development of young embryos takes place within the mammalian ovary and that certain placental structures are produced under these conditions.

We may furthermore conclude that the growth of young embryos within the body of the mother alone is not sufficient to prevent the degeneration of corpora lutea, which, as we know, does not take place, or is very much retarded in pregnancy. We have to consider the possibility that the decidua is the main factor which prevents the degeneration of the corpora lutea during pregnancy. We are carrying on at the present time experiments to decide this question.

DISCUSSION

DR. OPIE: The bearing of these experiments of Dr. Loeb on the pathogenesis of extra-uterine pregnancy is obvious. One point that Dr. Loeb has made clear seems to me of special interest, namely, that using his method of mechanical stimulation it is possible to produce decidua formation in the uterus, but it is quite impossible to produce this change outside of the uterus. There has been a long-continued controversy concerning the formation of decidua in the tube in association with tubal pregnancy, and the consensus of opinion, particularly emphasized by Aschoff, indicates that

decidual cells are found in the tube in scant amounts, if at all, and probably not in the early stages of tubal pregnancy. The mechanical means that Dr. Loeb has employed are effective in bringing about decidua formation in the uterus, but are ineffective in the tube. The experiments further show the capacity of the ovum for development in the absence of active decidua formation. Where for some reason which is not clear the impregnated ovum finds lodgment in the tube, it is capable of developing and reaching considerable growth, even though decidua formation is scant or absent.

DR. SCHWARZ: I would only like to ask Dr. Taussig a question: Is it not a fact that some time ago you examined a number of tubal pregnancies and found decidua formation always present?

DR. TAUSSIG: I had one case of about four months' gestation in which the pregnancy had progressed until the time of operation in which a well-formed decidua, that is comparatively well-formed, was present in the fimbriated end of the tube. The patches of decidua were about the size of 1 cm. There was present also in this case a parovarian cyst and in the peritoneal lining of the cyst a distinct decidual layer could also be traced. Decidual nodes, varying in size from 2 to 3 mm. up to 1 cm., have been described as lying directly beneath the peritoneum of the uterus in a certain percentage of intra- and extra-uterine pregnancies. That this formation of an ectopic pregnancy should occur in the human race and not in lower animals is a point of considerable interest and might account for the relative frequency of tubal pregnancy in the human race as compared with guinea-pigs and rabbits.

DR. LOEB (closing): In human beings the formation of decidual nodules has been found outside of the uterine mucosa, namely, in the supertoneal connective tissue of various organs, even in the appendix. Various observers, especially Dr. Clarence Webster, found the development of decidua in tubal pregnancies; Dr. F. J. Taussig also could observe it in his case of tubal pregnancy.

I showed experimentally in the guinea-pig that two factors are essential for the production of the decidua: (1) a chemical sensitization of the uterine mucosa through a substance secreted by the corpus luteum; (2) a mechanical stimulus supplied through the ovum or experimentally through incisions or foreign bodies or other irritations. In the guinea-pig decidua cannot be produced experimentally outside the uterine mucosa and especially not in the tube. The specimens which I present demonstrate that the ovum is not more potent in eliciting a decidual reaction than are experimental mechanical stimuli.

I observed, furthermore, that all those factors which in the guinea-pig suppress or diminish the development of maternal placenta (decidua) exert at approximately the same ratio an unfavorable influence on the development of intra-uterine pregnancy. All these observations make it probable that the ability of the host tissue to produce a sufficient quantity of decidual tissue is an important factor so far as the fate of intra- or extra-uterine pregnancy is concerned.

REVEREND JOHN WESLEY'S MEDICAL WORKS.—BY DR. GEORGE DOCK

In the extraordinarily busy life of John Wesley, medicine had an important part. As an Oxford undergraduate Wesley adopted habits of living in accordance with the advice given by the celebrated Dr. George Cheyne. As his religious activities increased he opened dispensaries in several cities where the sick could be treated by physicians, and in 1747, at the age of 44 years, he published a little book on domestic medicine entitled "Primitive Physic." No less than thirty-two editions were published in England; seven in America and several others in other countries. The book shows a striking combination of sound common sense, with a

belief in therapeutic methods varying from the most ancient superstition to the use of relatively complicated herb medicines. Soot and treacle for ague; hog's lard to the feet for whooping-cough; eow heel broth for consumption and boiled nettle poultice for sciatica are some of the prescriptions. Many charms were recommended and along with these are sensible suggestions about diet, including the use of whole wheat bread, long before the time of Graham. Cold baths are also recommended for many conditions in which we now know they are useful, although in Wesley's time they were wholly neglected by the medical profession. Wesley's therapeutic methods are not so much at variance with the practice of the time as one might think. In many respects he was far ahead of his time. Of the 160 drugs he recommended, half of them are still in the U. S. Pharmacopeia and a number of others were there until a few years ago. Most of the remainder are mentioned in the standard materia medicas at present. He was singularly ahead of his time in the important matter of pathology of itch; his proverb, "cleanliness is next to Godliness," is still needed. Wesley's failure to improve methods of medical practice seem possible to explain by deep-seated mental tendencies. It is interesting that notwithstanding his thorough belief in the efficacy of prayer, he did not recommend methods such as those that were proposed after the time of Darwin. On the whole, his works may be read with some interest not only in relation with the practice of the eighteenth century, but as a warning to the future.

GRAND RIVER ELEVENTH DISTRICT MEDICAL SOCIETY

The annual meeting of the Grand River Eleventh District Medical Society convened at Chillicothe, March 19. This district is composed of Livingston, Linn, Carroll and Chariton counties.

The program was quite an extensive one and well carried out, the following papers being read: "The Feeding of the Sick Infant," by Frank C. Neff, M.D., Kansas City; discussed by Drs. B. N. Stephens and Tinsley Brown. "Interesting Pathological Specimens," by H. P. Kuhn, M.D., Kansas City; discussed by Drs. F. J. Lutz, R. L. Neff, C. C. Conover and Tinsley Brown. Report of a case of Still's disease, with presentation of patient and x-ray findings, by C. C. Conover, M.D., Kansas City; discussed by Drs. M. B. Clopton, H. P. Kuhn, R. L. Neff, D. L. Shumate, W. L. Brosius; Dr. Conover closing. "Deviated Septum," by D. L. Shumate, M.D., Kansas City. "The Treatment of Neuralgia," by G. Wilse Robinson, M.D., Kansas City; discussion by Drs. C. R. Woodson, A. W. McArthur and M. B. Clopton; Dr. Robinson closing. "Sugar in the Treatment of Inoperable Cancer," F. J. Lutz, M.D., St. Louis. "Some Do's and Don'ts in Eye Work," by Joseph W. Charles, M.D., St. Louis. "Bone Transplantation," by C. M. Nicholson, M.D., St. Louis. "Cod Liver Oil," by Woodson Moss, M.D., Columbia. "Eclampsia," by A. L. Gray, M.D., St. Joseph. "Some Recent Methods in the Treatment of Pernicious Anaemia," by Walter Baumgarten, M.D., St. Louis. "Surgical Complications of Typhoid," by M. B. Clopton, M.D., St. Louis. "Fracture of the Skull," by A. W. McArthur, M.D., Kansas City.

In the evening a public session was held at the Methodist Church and addresses were made by Dr. F. J. Lutz, St. Louis, on "The Cancer Problem"; Dr. E. H. Miller, Liberty, president of the Missouri State Medical Association, on "The Family Physician," and Dr. E. J. Goodwin, St. Louis, secretary Missouri State Medical Association, on "The Objects of the Organized Medical Profession."

There were thirty-five physicians present at the meeting.

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ST. LOUIS MEDICAL SOCIETY

MEETING OF FEBRUARY 28

The scientific program consisted of the following:

Dr. Ralph L. Thompson read a paper entitled "Some Pictures of Medical Interest in the Madrid Prado," illustrated with new lantern slides.

Dr. F. C. Ameiss read a paper entitled "The Honey Bee and Its Product," illustrated with lantern slides, a demonstration of the construction of a bee hive and the method of gathering the honey and exhibited the bees at work.

Dr. J. Ellis Jennings demonstrated a new instrument, a mouth gag.

The secretary read the following letter:

February 26, 1914.

Secretary St. Louis Medical Society.

Dear Sir:—Your letter conveying to me the endorsement of the St. Louis Medical Society of my work in prosecuting the quacks in St. Louis was received and I assure you that no congratulation that I received afforded me greater pleasure than to have the appreciation of the reputable physicians of St. Louis, which is worth more than the empty praises of men who are not actually acquainted with the conditions as they formerly existed in St. Louis.

In this connection I feel that the victory is not all mine because had it not been for the able assistance given me by members of the St. Louis Medical Society, the conviction of these quacks would not have been as sure as it was.

Thanking you for your kind words of commendation and for your assistance in these cases, I remain

Respectfully yours,

(Signed) HOWARD SIDENER,
Prosecuting Attorney.

MEETING OF MARCH 7

The scientific program consisted of the following: Dr. Joseph Grindon read a paper entitled, "The Past, Present and Future of the Medical Library."

The president introduced Mr. Arthur E. Bostwick, librarian of the public library, who spoke of "Medicine in a Public Library."

Dr. George Dock read a paper entitled "The Physician and the Medical Library."

Dr. Robert E. Schluter read a paper entitled, "Other Medical Libraries."

On motion a medallion to Dr. Frank J. Lutz was ordered made and placed in the medical library of the society for his persistent and unselfish devotion as librarian and that a committee of three be appointed to whom this matter shall be referred with power to act, the funds necessary to be raised by voluntary subscription.

The chair appointed Drs. Amand Ravold, George Dock and Robert Barclay.

Dr. Marsh Pitzman, chairman, reported for the Committee on Health and Public Instruction, and offered the following resolution:

WHEREAS, The general assembly has passed the milk bill prepared by the health department and introduced by Dr. Robert E. Owen. And

WHEREAS, This ordinance will enable the board of health to insure pure milk of a standard quality to the people and conserve the health of the community, especially the health and lives of babies. Therefore be it

Resolved, That the St. Louis Medical Society expresses its appreciation of the action of the general assembly in making this bill a law, and congratulates the members of the assembly and his honor, the mayor, for their support of the people in protecting the health of the community.

The society unanimously adopted these resolutions.

On motion by Dr. E. J. Goodwin, the society unanimously endorsed the movement inaugurated by the friends of the Mount St. Rose Hospital to obtain a fund of \$300,000 by popular subscription.

The chair appointed Dr. R. Emmet Kane, Dr. Carroll Smith and Dr. John C. Faulk a committee to draw up a fitting memorial including the names of the members of the St. Louis Medical Library Association, which shall forever adorn the walls of this society's building as was ordered by the society, according to the resolution passed at the annual meeting of 1914.

MEETING OF THE COUNCIL, MARCH 11

The meeting was called to order by the president, Dr. A. F. Koetter.

The minutes of the regular meeting of February 11 and of the special meeting of February 23 were read and approved.

Councilors present: Drs. Roland Hill, Frank Hinchey, Philip Hoffman, F. J. V. Krebs, J. Henry Amerland, Walter B. Dorsett, Robert M. Funkhouser, William H. Stauffer, M. A. Bliss, C. E. Burford and P. G. Hurford.

Councilors absent: Dr. A. H. Hamel.

Visitors present: Drs. A. H. Sewing, Robert E. Schluter, Charles Shattinger, John W. Marchildon, Walter C. G. Kirchner, E. J. Goodwin, Frank J. Lutz and F. J. Taussig.

Dr. A. H. Sewing, chairman of the membership committee, made a report for his committee.

Dr. A. H. Conrad was elected to active membership by ballot.

Dr. Frank J. Tainter's application for corresponding membership was read for the first time.

Dr. A. H. Cleveland's application for active membership by transfer from the St. Clair County Medical Society was read for the first time.

Dr. Arminius F. Boek was elected an honor member.

Dr. Frank J. Lutz, chairman of the Library Committee, made the following report, which, on motion, was adopted.

The Library Committee begs leave to make the following report:

Thanks to the efforts of the House Committee, the physical condition of the library has been very greatly improved. The changing of book stacks has increased the reading room space, and has resulted in better ventilation and more light, and it remains only to make systematic provision for keeping the library in sanitary condition.

We would suggest that the Council instruct the House Committee to place the janitor at the disposal of the Library Committee for two hours each afternoon, preferably the hours from 2 to 4 o'clock. This will enable him to keep the library clean, with the expenditure of less time.

When the library was transferred from the St. Louis Medical Library Association to the St. Louis Medical Society the possessions, so far as books are concerned, were treated as one item. The Library Committee is just now engaged in preparing an inventory of the books and journals in the library, both for the information of the society as well as for its protection.

During the month of February, the committee has expended for binding \$25.70, for subscriptions to journals \$38.00.

After proper consideration and conference with members of the society, the committee has decided to discontinue, after the completion of the current volumes,

the following journals: *Archiv fur Mikroskopische Anat. und Entw.*, *Dermatologisches Wochenschrift*, *Centralblatt fur Physiologie*, *Jahrbuch fur Kinderheilkunde*, *Annales de L'Institut Pasteur*, *Zeitschrift f. Kinderheilkunde*, *Zeitschrift f. Hygiene*.

It has ordered the following journals: The *Annals of Surgery*, The *American Journal of Anatomy*.

Since the first of March, Miss Ella Lawrence has taken charge of the library. She comes to us highly recommended and with several years' experience as a medical librarian, and already her work is very apparent in the library, and the committee confidently hopes that her efficiency will contribute much towards making the library useful to our members.

The committee is glad to report an increased attendance on the part of the members, the average attendance since March 1 being six daily.

FRANK J. LUTZ, Chairman.

Dr. Walter Kirchner, chairman of the Program Committee, made a report for his committee, which was accepted.

Dr. F. J. Taussig, representing the American Society for the Control of Cancer, asked for the cooperation of the St. Louis Medical Society for a public meeting on cancer. The matter was referred to the Committee on Health and Public Instruction, and this committee was instructed to make a report to the general society Saturday night.

The secretary read a letter from Dr. E. J. Goodwin, secretary of the Missouri State Medical Association, which, on motion, was referred to the Ethics Committee. The Ethics Committee was instructed to investigate every member who is doing contract practice.

The editor of the *Bulletin* was requested to publish in the next three successive *Bulletins*, Section 10 of Chapter 12 of the Missouri State Medical Association By-Laws, as follows:

Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

No one shall become a member of any component county society nor continue as such, who engages in contract practice with any lodge, society or individual; unless he shall receive for services rendered, the regular fee, as per fee bill established by said society. Provided that this shall not prohibit an agreement for a particular case, nor apply to examinations for an adequate fee.

No one shall become a member of any component county society nor continue as such, who is guilty of soliciting patronage or obtaining patients by a division of fees, or by other means of inducing physicians or other persons to bring patients to him for a consideration, for treatment or operation.

MEETING OF MARCH 14

The scientific program consisted of the following:

Dr. F. W. Bailey read a paper entitled, "Congenito-Mechanical Dilation of the Colon," illustrated with lantern slides.

Discussion by Dr. J. McH. Dean; Dr. Bailey closing.

Dr. Rollin H. Barnes read a paper entitled, "A Few New Proctological Ideas."

Dr. William H. Stauffer read a paper entitled, "The Operative Treatment of Hemorrhoids and Fistula in Ano," illustrated with lantern slides.

Discussion by Drs. Robert E. Schluter, F. Reder and John McH. Dean; Dr. Barnes and Dr. Stauffer closing.

At the request of the president, Dr. O. H. Brown introduced Major Clyde S. Ford of the Medical Corps of the U. S. A., the guest of the evening. Major Ford addressed the members, his subject being, "Reminiscences of a Medical Officer in the Two Balkan Wars," illustrated with lantern slides.

The president announced the death of one of our honor members, Dr. William V. Loftus, and appointed the following active and honorary pallbearers:

Drs. F. J. Lutz, William J. Langan, F. C. E. Kuhlmann, R. E. Schluter, A. H. Hamel, A. F. Koetter, Thomas S. Hawley, Charles Heyer, Frank P. Johnson, James M. Scott, Aaron J. Steele, William Webb, Jerome K. Bauduy and Frederick W. Wesseler.

MEETING OF THE GENERAL SOCIETY MARCH 21

The scientific program consisted of the following:

Dr. Montague M. Meyers reported an interesting case of stomatitis ulcerosa (Vineent's angina).

Discussion by Drs. L. K. Guggenheim and O. H. Brown, Dr. Meyers closing.

Dr. I. D. Kelly, Jr., read a paper entitled, "Observations on Exudative Middle Ear Catarrh."

Discussion by Drs. W. M. C. Bryan and L. K. Guggenheim, Dr. Kelley closing.

Dr. S. T. Lipsitz read a paper entitled "Open Air Schools, with Special Reference to the School in St. Louis," illustrated with lantern slides.

Discussion by Dr. A. C. Henske.

Dr. Edwin J. Schisler read a paper entitled "Experiences in the Treatment of Bichloride Poisoning."

Discussion was opened by Dr. Ralph Kinsella, followed by Dr. O. H. Brown, Dr. Schisler closing.

The secretary read the following report from the Committee on Health and Public Instruction:

A request by Dr. F. J. Taussig of the American Society for the Control of Cancer for endorsement of a movement to hold a large public meeting to stir up interest in the cancer problem, was referred during the past week to your Committee on Public Health and Instruction. Said meeting to be held under the management of the American Society for the Control of Cancer, and to be held at some yet undetermined date.

Your committee has looked into the standing of the American Society for the Control of Cancer, and into the tentative plans for the meeting. We feel:

That the objects of the Society and plans for the meeting are admirable.

That our Medical Society as such, on account of the fact that the cancer topic is not one of special interest to all members of the society equally, should undertake no financial or other responsibilities for the success of the proposed meeting.

That with these limitations the St. Louis Medical Society give its endorsement to the public meeting.

Respectfully submitted,

(Signed) MARSH PITZMAN,

ALGERNON S. BARNES, JR.

The society gave its unqualified endorsement to the American Society for the Control of Cancer.

Dr. Kane reported orally for the Committee on Quacks and Quackery.

MEETING OF MARCH 28

Dr. C. E. Burford introduced Mr. Luther E. Smith, secretary of the Pageant Committee. Mr. Smith addressed the members on the pageant and masque of St. Louis.

A rising vote of thanks was given to Mr. Smith for his interesting talk.

The scientific program consisted of the following:

Dr. George M. Smith of the Washington University, by invitation, read a paper entitled, "Recent Experiments Bearing on the Etiology of Gastric and Duodenal Ulcers."

A paper entitled "The Atrium Pylori and the Duodenum in Pyloric Exclusion," by Drs. Wm. T. Coughlin and R. L. Thompson, was read by Dr. Coughlin.

Discussion by Drs. Dean and Ambrose.

Dr. Marsh Pitzman, chairman, read the following report for the Committee on Health and Public Instruction:

Your Committee on Health and Public Instruction, after careful investigation of the campaign now being carried on by the St. Louis Board of Health and the St. Louis *Republic* in the interest of the public health for the eradication of the fly.

Resolved, That the St. Louis Medical Society endorses the efficient work of the St. Louis Board of Health and the St. Louis *Republic* in their campaign, and that a copy of these resolutions be sent to the Board of Health and the St. Louis *Republic*.

(Signed) MARSH PITZMAN,

A. S. BARNES, JR.

The report of the Committee on Health and Public Instruction was accepted and the resolution unanimously adopted.

The average attendance at these meetings was 120.

F. C. E. KUHLMANN, M.D., Secretary.

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MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI, ST. LOUIS

The February meeting of the society was called to order by the president, Dr. L. J. Oatman, at the City Hospital, Thursday evening, February 5, at 9 o'clock. The meeting was a very successful one, both from the viewpoint of attendance and the interest displayed in the program. The program was entirely clinical. The usual "Order of Business" was suspended in order not to detain the patients who were to be presented too long. The following was the program:

Two Cases of Pneumothorax, Dr. Rathbun and Dr. M. Levy.

Discussion opened by Dr. O. H. Brown and Dr. L. S. Luten. Cases discussed by Drs. O. H. Brown, Rolla Henry and F. C. Rathbun.

An Unusual Case of Tabes, Dr. Sam Norris.

Discussion opened by Drs. M. W. Hoge and G. C. Chaddock. Dr. Sam Norris was unable to attend and Dr. McKelvey presented the case for him.

Recess of ten minutes declared to examine the patient. Discussion by Drs. M. Hoge, Chaddock, Given Campbell, Seelig, Simon and Monte Meyers.

A Case of Lipoma of Labia Major, Dr. Hourm.

Discussion opened by Dr. F. Taussig. Dr. Hourm closed.

Minutes of several previous meetings were then read and approved.

The applications of Dr. A. C. Leggat, Dr. Edwin C. Ernst, Dr. Charles H. Burdick, Dr. A. C. Vickery and Dr. Thomas B. Butler for active membership were read and referred to the Executive Committee.

Dr. Ralph A. Kinsella was elected to membership.

Attendance: Members, 18; visitors, 26.

Following is the program of the March meeting held at the City Hospital March 5:

Presentation of Cases and Specimen: (a) Case of Pellagra; (b) Case of Amebic Dysentery with Specimen of Ameba Tetragina, by Dr. E. N. Toby. (c) Unusual Pathologic Specimen, by Dr. S. A. Baldwin.

Pellagra in City Hospital, by Dr. A. H. Fortner.

Discussion by Drs. George Dock, M. F. Engman, Joseph Grindon.

One Hundred Cases of Lobar Pneumonia, with Special Reference to Treatment, by Dr. Frank Jolley.

Discussion opened by Dr. William Engelbach.

JACKSON COUNTY MEDICAL SOCIETY

It has been the object of the program committee to consider on meeting nights interesting subjects of medicine rather than to have papers on various subjects on the same night. At the meeting of February 3, Robert M. Schaufler presented a paper on "Posture in Health and Disease"; Benjamin J. Belove, "Prevention of Deformities in Schoolchildren." The discussion of these two papers was made by J. D. Griffith, C. B. Francisco and Walter Sutton. It was noted that there is a difference of opinion in regard to the method of prevention of deformities of schoolchildren, not only among the various medical men, but also orthopedists.

At the meeting of February 10, Herman E. Pearse presented a paper on "Fixation of the Colon for Ptosis," and Jabez N. Jackson on "Pericolitis and Allied Conditions about the Ileocecal Junction." These subjects were discussed by Drs. Hertzler, Hill and other members of the society.

The night of February 17 was devoted to "Diagnosis in Genito-Urinary Surgery," by Clarence Capell. This was followed by a discussion of the same subject from the standpoint of the Roentgen ray, by E. H. Skinner. Leon Rosenwald gave a "Lantern-Slide Demonstration of the Papilloma of the Bladder." E. G. Mark discussed the subject of "Carcinoma of the Prostate."

On February 24 J. E. Hunt presented the subject of "Vaccine Treatment of Typhoid Fever in Children," and Edwin Henry Schorer that of "Intravenous Injection of Diphtheria Antitoxin in Children."

February 10 the following members were elected to membership: Lindsay S. Milne, Oliver S. Gilliland, Calvin L. Cooper, B. T. Sharp, R. C. Henderson.

February 24 the matter of presenting a "Quack Program" was discussed. It was suggested that the matter be taken up with the Atheneum and will be reported on at a later date.

The Kansas City Hospital Improvement Association has been organized. The object of the association is to discuss the matters of interest to those intrusted with the care of the hospitals of Kansas City and to devise a better system of cooperation between the various hospitals. The members of the association at present are Mr. A. C. Stowell, St. Luke's Hospital, president; Drs. R. E. Castelow, superintendent of the General Hospital, secretary; Fred L. Woodell, superintendent of German Hospital; J. Archie Robinson of Wesley Hospital; S. C. Fox, Missouri Pacific Hospital; Rev. A. W. Linquist, superintendent of Swedish Hospital; Noad Adams of the Baptist Hospital and J. W. Perkins of the University Hospital.

The night of March 3 was given over to obstetrics and pediatrics. B. G. Hamilton presented the "Conduct of Normal Labor." F. E. Wilhelm gave a résumé on the progress of obstetrics in 1913, and F. C. Neff a résumé on the progress of pediatrics in 1913.

The night of March 10 was devoted to presenting of cases and specimens, cases being presented by Joseph Lichtenberg, William Frick, O. L. Castle, F. C. Neff, Dr. Ginsberg, Richard M. Sutton, Dr. Shelton and G. W. Robinson.

On the night of March 17 Dr. G. Wilse Robinson presented the subject on the "Treatment of Neuralgia," and Dr. Comingo Griffith gave a "Report of a Case of Hodgkin's Disease with Results of Vaccine Treatment."

On Tuesday night, February 24, the pledge and declaration was presented to the society. This pledge and declaration had been previously proposed and recommended by the council. It is optional with the present members of the society as to whether or not they shall sign it, but will be required of new members at the time of admission to the society. The society is to be favored with some ten to twenty lectures on Tropical Medicine, by Capt. Charles Craig, U. S. Army, Fort Leavenworth, Kan.

EDWIN H. SCHORER, M.D.

JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society met in regular session Tuesday, March 10. A goodly number was present from the various parts of the county. An interesting and instructive paper was presented by Dr. W. G. Thompson of Holden on the subject of "Bacterial Vaccines." A lively discussion ensued, which showed an active interest in this modern method of therapeutics.

Our society is ever striving for the advancement of the medical profession in every practical and scientific way and to foster the spirit of good fellowship among the physicians of the community. Kindly feelings one to another bring into harmony the many attributes of the individual physician; exchange of opinion crystallizes the result of individual thought and investigation into truth; we should make our local societies prominent factors in the social and civic interests of the community; strong and influential county organizations make powerful state and national associations; the strength of the component parts of any organization determines its usefulness. Every effort, therefore, should be made to gather within the folds of county society membership every reputable physician within its jurisdiction. It is a mistaken idea that one can be as good a physician outside of a medical society as in it. Also the good which a physician can render the community in which he lives is much enhanced by becoming a member of his county society.

Would it not be better to lay aside any differences and unite our efforts for a more powerful and beneficial fraternity? Our profession should be something more to us than the dollars which we are able to receive for our services.

O. B. HALL, M.D., Secretary.

LACLEDE COUNTY MEDICAL SOCIETY

The Laclede County Medical Society met at Lebanon, March 9, in the parlors of the Laclede Hotel, with the president, Dr. J. H. Reser, of Conway, in the chair.

For some reason not known to the secretary, the attendance was not as large as usual, although there were enough to make things very interesting.

Dr. J. L. Benage, Lebanon, not being able to be present, sent his paper, which was read, and the doctor commended for his thoughtfulness as well as for the merit of the paper. The paper was on "Acute Infections of the Urinary Tract." The author admonished his hearers to be extremely careful with the catheter when introducing it into the bladder. First, it should never be passed when there is any way to avoid it; second, that when it passes through the urethra into the bladder it should go in the bladder; third, unusual care should be taken that all germs be left on the outside.

The physicians present gave their experiences with infections, especially of the urethra.

Dr. Howard Albert Hamilton, Drynob was elected to membership.

J. A. McCOMB, M.D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Aurora, March 3, 1914. The following members were present: Drs. Stevenson, Miller, Adams, Robertson, Andrews, Kerr, Shelton, Harris, Rodman, Smith, Loveland, Grigg, Johnson, Moore and Hynes.

Dr. C. A. Moore, Aurora, and Dr. Joseph C. Hynes, Pierce City, were elected members of this society.

Dr. C. W. Russell, Springfield, and Dr. Cox, Omaha, Ark., were made honorary members.

The following program was rendered: "Prevention of Tuberculosis," by Dr. J. A. Harris, Mt. Vernon; "A Study of the Turbinates," by Dr. C. A. Moore, Aurora;

"The Comprehensiveness of the Word Consciousness as Applied to Mental Diseases," by Dr. S. A. Johnson, Springfield; "The House-Fly," by Dr. W. S. Loveland, Verona; Report of a Case, by Dr. F. S. Stevenson, Aurora.

The society adjourned to meet at Aurora, June 2, 1914.

R. C. ROBERTSON, M.D., Secretary.

NEW MADRID COUNTY MEDICAL SOCIETY

The society met at New Madrid in the offices of Drs. Woodworth and O'Bannon, Dr. Digges, president, in the chair.

Dr. William N. O'Bannon of New Madrid, read a paper on "Urinalysis," and under this title gave us the latest test.

Dr. Woodworth of New Madrid, presented an interesting case of "Seborrhea," that was responding nicely to treatment; also a case of burn reported by Dr. O'Bannon in which glycerite of tannic acid was reported as earing for the pain as well as favorable progress of case. Dr. Sibley of Marston, reported an interesting case of dystocia; Dr. Digges reported an interesting case of typhoid fever, and commented on the unusually large number of cases in our locality for the past few months.

Next meeting of the society will be at Lilbourn at 3 o'clock p. m., April 14.

JOHN H. TIMBERMAN, M.D., Secretary.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at the courthouse in Marshall, March 10, at 2 p. m. President Tuttle being absent, Vice-President A. E. Gore presided. The minutes of the preceding meeting were approved.

Application for membership from Dr. Earl H. Coon, Grand Pass, was presented and referred to Drs. Aiken and Brown.

The program consisted of a paper entitled "Historical Points of Medicine," by Dr. D. C. Gore. The paper was very interesting and highly appreciated.

On motion, Dr. Gore was asked to present his paper at the coming district meeting to be held in Marshall in April and that the paper be sent to the Editor of the state journal for publication.

On motion, Dr. D. F. Manning, Marshall, was elected delegate to the State Association meeting at Joplin. Dr. G. A. Aiken, Malta Bend, was elected alternate.

On motion, Dr. D. F. Manning was asked to present his recent paper on "Diagnosis" at the coming district meeting.

No more business presenting, the society adjourned to meet May 12, 1914, at 1 p. m.

G. A. AIKEN, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, March 18, President J. J. Bansbach in the chair. Twenty-one members present.

The minutes of the previous meeting were read and approved.

The Committee on Public Health and Legislation reported progress in the matter of having this society incorporated, and requested permission to defer action regarding the McPhail and Neal Institute until the incorporation of the society was made complete.

The application of Dr. Phene Skinner was presented and had its first reading and referred to the board of censors to be acted on at our next regular meeting.

The application of Dr. Emmett F. Cook having been favorably reported by the board of censors, was voted

on and the doctor duly elected a member of this society.

Dr. J. I. Byrne read a paper, which was discussed by Drs. Spencer, Owens, Leu, Doyle, Holley, Charles Geiger, Woodson and Bansbach. Discussion closed by Dr. J. I. Byrne.

W. F. GOETZE, M.D., Secretary.

VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in regular session Thursday at Dr. I. W. Amerman's hospital; the attendance was unusually large. The morning session was devoted to the examination of numerous clinical cases, which consisted of skin, ear, nervous, infected and many chronic cases. Some of these cases were so interesting that photographs were made of the conditions and will be reported for publication in medical literature.

After the clinics Dr. Amerman entertained the society with a splendid five-course luncheon, which was thoroughly appreciated. Cigars and coffee followed, and jokes and clever repartee flashed brilliantly around and across the banquet table.

In the afternoon the society was called to order by the president, Dr. E. A. Dulin, and the minutes of the previous meeting were read by the secretary, Dr. J. T. Hornback, after which Dr. William W. Duke of Kansas City read a highly interesting paper on "Status Lymphaticus and Hyperplasticus." The address was highly scientific and advocated many of the advanced ideas concerning the secretions of the glandular structures of the body. The paper was extensively discussed by Dr. J. F. Robinson, formerly superintendent of the State Hospital No. 3, and by Drs. Dulin, Amerman, Wilson, Petty and Sutton of Kansas City.

Dr. Richard L. Sutton gave a demonstration of the use of carbon dioxide snow in the treatment of a case of precancerous condition of the lip.

Dr. Amerman read an ably prepared paper on "Intestinal Stasis," which was freely discussed. Dr. Dulin also read a splendid paper on the same subject, both papers being received in a complimentary manner.

Dr. Richard L. Sutton, Kansas City, who is president of the Jackson County Medical Society, read a paper on "Syphilis," giving the up-to-date treatment.

Among those present were Dr. Sutton and Dr. Duke, Kansas City; Dr. Walker, Harwood; Dr. Davis, Walker; Drs. Musser and Altham, Metz; Dr. Cruse, Richards; Dr. Leisure, Stotesbury; and Drs. Bohannon, Robinson, McLeMore, Williams, Callaway, Yater, Dulin, Amerman, Wilson, Craig, Hornback, Petty, Brown and others, Nevada; and Dr. Etter, Sheldon.

The society congratulates itself because of the fact that this meeting was the very best in its history, and because of the presence and lectures of Drs. Duke and Sutton, Kansas City.

J. T. HORNBACK, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in quarterly session at Fordland, March 18, 1914. The meeting was called to order by the president, Dr. J. W. Good, at 1 p. m. Drs. Highfill, Sayers, McHaffie, Adkins, Bruton, Good and Bruce were present. Drs. S. O. H. Williams, Fordland, T. O. Klingner, district conneilor, and H. A. Lowe, Springfield, were present as guests of the society.

Regular business was taken, and then the time was spent in discussion of the new and late remedies, followed by a paper by Dr. Klingner on "Ophthalmia Neonatorum," which was discussed at length by members present.

Dr. Lowe read a paper on "Unnecessary Operations for Menstrual Disorders," which also was freely dis-

cussed. These papers were very interesting, and these doctors were tendered a vote of thanks and appreciation.

A case for discussion, as to lines of treatment, was presented by Dr. Sayers of a young girl who had an operation for pneumothorax.

Voted to hold our next meeting at Bell Springs in June and to have a basket picnic. All the doctors' families and friends are invited. Adjourned at 4 p. m.

J. B. BRUCE, M.D., Secretary.

WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society held its regular meeting at Mansfield, February 6. The following members were present: Drs. Daugherty, A. C. Ames, J. A. Peyton, J. E. Butzke, Mountain Grove. Drs. R. A. Ryan, J. A. Fuson, R. M. Rogers, Mansfield. Visitors: Dr. J. B. Little and Dr. L. T. Vanoy, Norwood. The application of Dr. L. T. Vanoy, Norwood, was presented to the society by censors, with a favorable report. Motion was made and seconded that the secretary cast the ballot for the election of Dr. L. T. Vanoy. The secretary voted his election.

The president appointed a committee for lectures offered by the American Medical Association, Drs. R. A. Ryan, J. A. Peyton and J. A. Fuson.

Dr. R. A. Ryan, Norwood, read a very complete and instructive paper on "Pneumonia." Dr. J. A. Peyton read a very instructive paper on "Influenza." These papers were both discussed by all the members present. The important points brought out by the discussion were that no routine treatment could be used in pneumonia. Each patient must be treated as symptoms indicate, except that fresh air was always necessary. Dr. Rogers suggested that serums and vaccines be used more frequently in both diseases. Dr. Peyton brought out the important fact of when to use a vaccine and when to use a serum, or both; also the treatment of complications in influenza.

There being no other business, Dr. R. A. Ryan made a motion that the next meeting be held at Norwood in May, the date to be decided by the president. Motion carried.

E. J. BUTZKE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

Since the publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

TRYPSIN, FAIRCHILD.—A powder consisting of the proteolytic enzyme of the pancreas, separated to a considerable extent from the other enzymes and constituents of the gland and of a definite strength. Trypsin digests proteins and nucleoproteins in slightly alkaline media. Fairchild Bros. & Foster, New York (*Jour. A. M. A.*, March 7, 1914, p. 776).

CEROLIN.—Cerolin consists of the fats, cholesterins, lecithin and ethereal oil extracted from yeast by alcohol. Experiments have indicated that the laxative action of yeast depends on the fats and lipid constituents and that in skin affections these substances have the action of yeast itself. Hence cerolin, marketed in the form of cerolin pills, 1½ grains, is said to be useful in furunculosis, acne and in other skin affections. It is also said to be useful in

habitual constipation, leukorrhea, erosions of the vagina and cervix and in similar diseases. Merck & Co., New York City (*Jour. A. M. A.*, March 21, 1914, p. 931).

REFINED AND CONCENTRATED TETANUS ANTITOXIN, SQUIBB.—For description see New and Nonofficial Remedies, 1914. Marketed in the form of syringes containing respectively an immunizing dose and a curative dose. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, March 21, 1914, p. 931).

TYPHOID VACCINE (IMMUNIZING).—For description of typhoid vaccine see N. N. R., 1914, p. 259. It is prepared according to the method of the U. S. Army Laboratory. Marketed in ampule and syringe packages each containing 500 million, 1,000 million and 1,000 million killed typhoid bacilli. H. M. Alexander & Co., Marietta, Pa. (*Jour. A. M. A.*, March 28, 1914, p. 1014).

B. B. CULTURE.—A pure culture of *Bacillus Bulgaricus* marketed in bottles containing 90 c.c. Intended for use in intestinal indigestion and for the enterocolitis of infants. B. B. Culture Laboratories, Yonkers, N.Y. (*Jour. A. M. A.*, March 28, 1914, p. 1014).

PROPAGANDA FOR REFORM

AMORPHOUS PHOSPHORUS.—Amorphous or red phosphorus is chemically most inactive and pharmacologically is generally considered without action. Now Dr. I. L. Nascher proposes amorphous phosphorus as a remedy of remarkable value for arteriosclerosis of old age—but produces no reliable evidence for his claim. Based on Nascher's assertions, Sharp & Dohme advertise Pill Phosphorus Amorphous S. and D. as a successful method of treatment for senile arteriosclerosis. The asserted actions of amorphous phosphorus are such as may be calculated to appeal to the sexual neurasthenic and the advertisements are likely to bring about an extensive use of the drug by the uncritical. The psychic elements which play so large a part with the sexual neurasthenic will bring favorable reports on the drug—at least for a while—just as at one time ordinary phosphorus had a vogue (*Jour. A. M. A.*, March 7, 1914, p. 793).

RED PHOSPHORUS.—I. L. Nascher in a letter to the *Journal* states that he has had nothing to do with the exploitation of Pill Phosphorus Amorphous S. and D. He admits that he has no experimental basis for the use of this remedy and that his theory is simply a theory without facts to prove it (*Jour. A. M. A.*, March 28, 1914, p. 1033).

TOWNS' EPILEPSY TREATMENT.—This nostrum, formerly sold as Towns' Epilepsy Cure, is a bromid mixture that is taken indiscriminately by the public in doses that no physician would dare prescribe. The nostrum is given an editorial commendation in *The Western Christian Union* (*Jour. A. M. A.*, March 7, 1914, p. 794).

THE ABSORPTION OF IRON FROM MINERAL WATERS.—It is now generally admitted that both forms, organic and inorganic, of iron compounds can be absorbed and satisfactorily carry out the purposes for which they are ordinarily administered. Recent investigation has shown that iron salts are absorbed from natural waters (chalybeate waters) in which they occur and there is no reason for supposing that these cannot facilitate hemopoiesis and hemoglobin formation, if there is a deficiency in the iron-containing component of the blood, precisely as medicinally administered iron may. They seem to possess no advantage, however, over the latter (*Jour. A. M. A.*, March 14, 1914, p. 856).

RADIUM THERAPY.—The value of radium in the treatment of constitutional diseases has not been demonstrated. While some clinical evidence has been introduced to show a favorable effect from radial preparations, the interpretation of such evidence is always beset with difficulties; it is hard to separate the improvement which arises from psychic influence from that which rests on an objective basis (*Jour. A. M. A.*, March 21, 1914, p. 952).

CITROLAX.—Advertisements suggest that Citrolax is magnesium citrate in tablet form and superior to the regular magnesium citrate solution. Examination of Citrolax in the A. M. A. Chemical Laboratory showed that the tablets when treated with water did not give a clear solution. The watery solution was found to contain magnesium, sodium and citrate, while the insoluble portion was found to be phenolphthalein equivalent to $3\frac{1}{2}$ grains of phenolphthalein per tablet (*Jour. A. M. A.*, March 21, 1914, p. 949).

THOXOS.—Thoxos is offered to physicians by John Wyeth & Brother for the treatment of rheumatism, rheumatic arthritis, gout, etc., with the following incomplete statement of composition: "It is a palatable solution of Strontium and Lithium soluble salts, 32 grains, combined with twenty-four minims Wine of Colchicum Seed and a vegetable alterative, in each fluidounce, flavored with aromatics." From an examination in the A. M. A. Chemical Laboratory it was concluded that Thoxos contains strontium salicylate, lithium salicylate, small quantities of sodium salicylate, free salicylic acid and potassium iodid, and probably also colchicum and sarsaparilla. As strontium and lithium salicylate are generally considered to have about the same action as sodium salicylate, Thoxos may be considered as equivalent to a preparation containing in each dose of one teaspoonful 3 grains of sodium salicylate with a fractional dose of colchicum and potassium iodid (*Jour. A. M. A.*, March 21, 1914, p. 949).

THE DANGER OF CROTALIN.—A death from infection from the use of crotalin is reported by J. F. Anderson of the U. S. Public Health Service. Out of 95 ampules of crotalin solution, from four different manufacturers, 35 were found to be contaminated; further, 12 tablets were examined and all found to be contaminated. It was demonstrated that there was a variation in the activity of different lots of crude venom and also in the solutions prepared by the same or different manufacturers. The report emphasizes the dangers of the use of rattlesnake venom or crotalin for the treatment of epilepsy (*Jour. A. M. A.*, March 21, 1914, p. 934).

MERCURIC CHLORID AND THE PUBLIC.—In commenting on the use of mercuric chlorid tablets by the public and on the attempts to check this by special legislation, M. I. Wilbert points out that the exploitation of this drug under non-descriptive titles such as "antiseptic tablets" is partially responsible for their indiscriminate use. The fact that they are given a distinctive shape or color does not serve to protect the purchaser if he is uninstructed as to their contents; instead it tends to elaborate on the misuse of the tablets. Physicians are to some extent responsible for the public use of tablets of corrosive mercuric chlorid, for in the past, these tablets have been prescribed or given to patients for antiseptic purposes without sufficient precaution as to their poisonous character (*Jour. A. M. A.*, March 28, 1914, p. 1042).

RADIUM AND ETHICS.—Referring to enthusiastic statements by physicians relative to the curative value of radium emanations, the *Edinburgh Medical Journal* asks if there is much difference between the advertisements of any catch-penny patent cure-all and such announcements. It is pointed out that the public is only too ready to believe any tale as to the value of

radium as a cure for gout, rheumatism and cancer and hence the medical profession should absolutely refrain from publicly encouraging such notions (*Jour. A. M. A.*, March 28, 1914, p. 1044).

BOOK REVIEWS

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. Octavo of 406 pages, illustrated. Philadelphia and New York: Lea & Febiger, 1914. Price per year: Paper, \$6.00.

This opening number of volume sixteen, March, 1914, sustains the Quarterly's reputation for thoroughness and progressiveness. The busy physician will find authoritative help on the following topics treated in this number: Surgery of the Head and Neck; Surgery of the Thorax, Excluding Diseases of the Breast; Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza; Diseases of Children; Rhinology and Laryngology; Otology. The usual index completes the volume.

GENITO-URINARY DISEASES AND SYPHILIS. By Edgar G. Ballenger, M.D., assisted by Omar F. Elder, M.D. The Wassermann Reaction. By T. Edgar Paullin, M.D. Second Edition. Pp. 529. E. W. Allen & Co., Atlanta, Ga., 1913.

This new edition contains many changes, but certainly could have been vastly improved by competent proofreading.

A few gross errors have been noted, and the chapters on the Wassermann test and the use of salvarsan and neosalvarsan seem to have been hastily added as an afterthought.

The book may serve as a student's manual, which the author states is its chief purpose, but in our experience students of medicine are most exacting critics, and we would hesitate to recommend this book to them.

Notwithstanding the mechanical defects, many valuable suggestions as to diagnosis and treatment are given.

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume III, Number 1 (February). Octavo of 190 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Published Bi-Monthly. Price per year: Paper, \$8.00; cloth, \$12.00.

The third volume of this ever-in-demand, up-to-the-minute publication starts quite favorably, showing the further progress and in some cases, complete histories of various cases reported in previous numbers. This number includes the following subjects: Fracture of Internal and External Malleolus on a Line with the Tibio-Astragaloid Articulation; Ankylosis of Hip due to "Lipping" of the Rim of the Acetabulum; Complete Bony Ankylosis Between Tibia and Patella and Femur; Tuberculosis of the Testicle; Charcot Ankle; Lord Lister and Antiseptic Surgery; Nitrous Oxid Anesthesia; Metastatic Infections; Gastric Ulcer and Gastric Carcinoma; Ununited Fracture of the Ulna. Transplantation of Bone from Tibia; Luxation of the Patella and Fracture of the Internal Semilunar Cartilage; Laminectomy for Traumatic Compression of the Spinal Cord; Removal of Enlarged and Dilated Stump of Gall-Bladder Following a Previous Operation, with Secondary Perforation of its Wall by Three Calculi; Radical Operation for Carcinoma of the Breast, with Description of Dr. Murphy's Special Technic.

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EDITOR

PUBLICATION { W. H. BREUER, M.D., Chairman
COMMITTEE { S. P. CHILD, M.D.
 { M. A. BLISS, M.D.

ORIGINAL ARTICLES

SOME SURGICAL COMPLICATIONS OF TYPHOID FEVER

MALVERN B. CLOPTON, M.D.
ST. LOUIS

Where surgery is practiced as a specialty and the lines between it and internal medicine are sharply drawn, particularly in hospitals, one thought is sharply outlined in the minds of both surgeon and physician, and that is, that the border-line between the surgical and medical diseases is not a narrow one, but so broad that it is difficult at times to say that any one class of diseases belongs wholly to either one or the other's special province. So it becomes a part of our hospital routine to have weekly, sometimes daily, visits of the medical man to the surgical wards and the surgeon to the medical wards to study each other's cases together; and the more frequent these joint visits the more we learn and the better the treatment of the patients. Perhaps the surgeon benefits more from his visits to the medical wards; certainly he finds the greatest incentive to research and study in the knowledge he gains of the newest theories of disease and the problems that they unfold. The improvement in surgical technique has made it possible to attempt relief in many erstwhile medical conditions where it is necessary to bring the greatest skill to bear. Notable in this have been the delicate cranial operations, which have brought relief from intractable neuralgia, the operations to relieve intra-cranial pressure or remove brain tumors, that have saved the sight and relieved the headaches or have cured the disease. Or those equally delicate operations that have permitted the removal of tumors of the cord or have exposed the spinal roots so they may be divided and given relief from pain or cure spasticity. Grave's disease, although still a most decidedly medical disease, comes to the

hand of the surgeon not to cure, but that he may, by the removal of part of the thyroid, take away some of the offending tissue and probably break the chain of those structures we hold accountable and make it possible for the medical treatment to be concluded with a more than 85 per cent. chance of cure. I could name many diseases, some of them essentially medical, where surgery offers part of the best treatment, and each year new fields are opened, such as, only recently, pernicious anemia, which has been shown to be best treated by the removal of the spleen. But I have thought it best to consider only a few of these instances where surgery is proper or imperative in some of the infectious diseases and to give a few observations from practice. All these surgical complications come as a lodgment and development of the infection in some place where tissue destruction cannot be taken care of by the general reparative processes.

In typhoid fever the most lethal complication is perforation of the bowel. The frequency is variously stated from 1.2 per cent. in the 2,000 Hamburg cases, to 3.6 per cent. in 9,713 American cases, and over one-third of all the deaths from typhoid fever are due to perforation. The early recognition of perforation is the most important factor in the outcome of the treatment, yet the most striking feature of the symptomatology is the elusiveness of its beginning, so that constant watchfulness is necessary to observe the first symptoms and to make an early diagnosis possible. The perforation occurs usually in the second and third week, yet it may occur as early as the first week, or as late as the seventh or eighth week. It is usually in the ileum within a foot and a half of the ileocecal valve, but may occur higher up, or in the large bowel and the appendix, it may be through several openings but it is usually a single puncture. It occurs in the mild as well as the severe typhoids. As the operative results are best when the cases are seen early it is most important to make an early diagnosis. In a patient with a clear sensorium the diagnosis is often easy if based

on sudden severe pain of increasing intensity, usually in the hypogastrium, rigid abdominal muscles, tenderness, nausea or vomiting and an increase of the pulse-rate with signs of collapse. In the presence of stupor the objective signs are often the only ones we can depend on—the increase in pulse-rate, a possible temporary drop of temperature, the presence of localized muscle spasm, with later return of rigidity, are of the greatest aid. In the hospitals with frequent blood-counts as a routine, the leukocyte counts may aid, particularly if after a slight recession there is an increase which persists. While we must bear in mind that there are many conditions closely simulating perforation, and are hard to diagnose, exploration in these cases does little harm and in some cases failure to operate will cost the life of the patient. As in all peritoneal infections the earlier the attack the better the results, so in typhoid perforations over half of the cases are saved that are operated within eight hours, while a third of all the cases operated get well. The differential diagnosis must be made between hemorrhage and perforation though they may occur at the same time. Hemorrhage gives collapse, drop of temperature, increased pulse-rate, but is usually not attended with pain, and the appearance of blood in the stools is conclusive. Volvulus and gall-bladder disease and appendicitis must be borne in mind. Thrombosis of the iliac veins closely simulates perforation.

The operative treatment consists in evacuating any fluid or foreign material in the general cavity, preventing as far as possible the infection from spreading upward toward the diaphragm by using Fowler's position and placing a tube into the pelvis for drainage, and either closing the perforation or bringing it to the surface where an enterostomy will permit the toxic bowel content to discharge. Water by rectum in large quantities is another life saver. The right rectus incision under local anesthesia or gas or ether does not take long and gives the best approach. I will recite a few cases I have observed:

CASE 1.—E. B., aged 27 years, seen with Dr. A. E. Taussig. A strong, healthy woman, had been in the hospital since July 30 with a severe typhoid, which had started a week before admission. The temperature had ranged between 103 and 105 and the pulse about 100, weak. The abdomen for the week previous had been distended occasionally and there had been at times complaint of soreness of the right side, which would pass off. There was a mild delirium and stupor and as many as ten temperature sponges were given a day. The bowels were moved regularly with an enema and were not constipated. A great deal of water was taken and the urinary secretion was good, but occasionally involuntary.

On the 17th day after a very delirious night, during which the temperature stayed about 103, and the pulse 112 to 116, the patient complained of sudden

pain in the right side of the abdomen, where she had previously had soreness. For this she had been given aspirin, gr. 10, by the house doctor, so that the fall of temperature to 99 as shown on the chart was difficult to interpret. Three hours later I saw the patient. She was feeling chilly, temperature 101, pulse 126 and weak, slight delirium, complained of no pain, abdomen soft and not distended. A stool of a few minutes before contained no blood. Later in the day the temperature had gone to 104 and the pulse was 104. The patient was somewhat stupid, but answered questions fairly intelligently. Complained of no pain and rested easily. Abdomen only slightly distended, some little tenderness over the whole abdomen, but not pronounced in any part, no muscle spasm and no rigidity and it was possible to palpate quite deeply. There was nausea, but no vomiting and no blood in the stool. From the history we strongly suspected perforation, but with the abdominal picture it was hard to convince ourselves, despite the chill and increase of pulse rate. During the night the pulse and temperature dropped lower than they had been for some time (temperature 100, pulse 114). The leukocytes, which had before the attack of pain been about 8,000, showed five hours after the pain 5,200 and then 6,000, and at twelve hours 7,200. The night was no worse than many previous. She had complained of no pain, but in the morning (twenty-five hours after perforation) the expression seemed more anxious, temperature 100, pulse 120, leukocytes 8,400. The abdomen was slightly distended and for the first time muscle spasm was detected in the lower right rectus and this decided that operation was advisable.

Under cocaine (1 per cent.) an incision was made close to the median line about 4 inches long. There was a gush of flocculent cloudy fluid as soon as the omentum was lifted from the lower right quadrant and the pelvis was full. A hurried search showed a perforation one centimeter in diameter and about 10 inches above the ileocecal valve. This was closed with a fine chromicgut suture and the closed perforation brought up and tied into the abdominal wound. After lightly sponging out the excess of fluid, a glass tube without a lateral perforation was inserted into the pelvis and the abdominal wound closed in large part.

The shock after this thirty minutes procedure was slight, but the pulse later in the afternoon was quite bad. There was no vomiting and very little complaint of pain. The pelvis drain only discharged for ten hours, but was left in place. On account of the heart only a slight elevation of the shoulders was possible. Salt solution was given both by rectum and under the skin. Twelve hours after the operation the patient became very weak, the pulse going to about 160 and respiration 68, but from that time there was an improvement, so that after forty-eight hours the condition was practically that of a sick typhoid, except for the discharge of the bowel through the perforation which had been brought up to the wound. On the third day the pelvic drain was removed. The kidneys showed at this time an acute nephritis of a severe grade. Six weeks after the operation the fever had entirely disappeared, but it was eight months before she was well enough to walk about, so debilitating had been her illness. The fecal fistula persisted as a minute discharging point. There was a complication of ischio-rectal abscesses which were very annoying. Several months later a slight evening rise of temperature and the fact that her health was never fully restored, made us suspicious of beginning tuberculosis. Some weeks later we were able to locate a small retrorotterine collection of pus, which was drained, and later the right ovary and the tube had to be removed for the infection which persisted.

Patient convalesced fairly from this operation. She was able to be up and around when a second collection of pus in the pelvis made another operation necessary. After this she never regained strength and died several weeks later from exhaustion.

CASE 2.—Miss W., aged 25 years. Mild typhoid in the fourth week. Slight abdominal pain, which came on suddenly, but accompanied by no severe general or local symptoms. Some pain to pressure to the right of the umbilicus, but no muscle spasm or rigidity. In consultation with Drs. Mudd and Luedeking it was thought that a perforation was about to occur, but with careful watching the symptoms did not advance, except for a distention which began to show itself on the third day and by the fifth day was most distressing. The tympany was marked but the bowels moved regularly and normally. The dyspnea increased, though the fever had entirely subsided, the patient became much worse, the heart became rapid and on the tenth day the patient died, having refused operative intervention at all times. At autopsy it was shown that the distention was due to gas in the peritoneal cavity. The intestines were collapsed. There was no peritonitis, except a little fluid in the pelvis, but the fat about the large bowel was everywhere distended by small gas bubbles and we found a small retroperitoneal perforation behind the transverse colon where the infection started. This was due to the gas bacillus of Welch which was cultivated and found on cover slips. The typhoid fever was entirely well. This late complication, which resulted in such an enormous distention that the heart was crowded to death could have been entirely relieved by a simple puncture with a trochar and cannula and more than likely would have saved the patient's life.

CASE 3.—W., aged 45, male. Drs. Luedeking and Mudd. Moderately severe typhoid with marked diarrhea, in the third week of the disease. He awoke in the morning with an intense abdominal pain and soon was in collapse. Almost from this incidence of pain the picture was one of acute peritonitis and operation was urged, but waiting for further consultation delayed operation until seven hours after first pain. At operation the abdomen was enormously distended with a cloudy fluid and the intestines were free from fibrinous adhesions of any sort, but were markedly injected and had lost their luster. The perforation was a minute one in the small bowel and it was closed. At the time we realized the patient's condition was hopeless because of the tremendous prostration in the hours since the first symptoms. His pulse was almost uncountable and the reaction in the abdomen led to the belief that we were dealing with a streptococcus infection, which is nearly always fatal. Later bacteriologic findings confirmed our operating room impression. The patient died twelve hours after operation.

The next case is one of appendicitis in typhoid.

CASE 4.—A youth, aged 24 years, seen in consultation with Dr. Brooks, who had been treating him for an uneventful typhoid now at the end of the third week. Four hours before I saw him he had been seized with a sudden pain referred to the pit of the stomach, but he had made no mention of it to anyone until just before we saw him. His temperature which had been gradually receding to about 100 in the afternoons, had gone up to 101 at 11 a. m., his pulse 120 and he had become nauseated, but did not present a picture of a seriously ill patient. The abdominal examination showed a soft abdomen except for the lower right quadrant, where there was rigidity and muscle spasm, and we felt that we were dealing with a small, early walled off perforation or an appendi-

citis. He agreed to operation which we did under ether, and found an appendix much swollen and edematous, but not gangrenous, wrapped about with omentum. The appendix and part of the omentum were removed. The bowel showed some few swollen Peyer's patches, but no evidence anywhere that the peritoneum was involved. The patient made an uneventful recovery from the typhoid and operation in the usual time.

Some authors advise operation for appendicitis occurring during typhoid only in those cases where pus is localized and the operation is done to evacuate it. This view is held because of the general high mortality in these operations. The difficulty in diagnosis must be borne in mind and also that the penalty of overlooking a perforation means certain death. So that I do not believe it wise to make or accept any hard and fast rules, but in each case determine the course to follow. It might be a fair rule to say that in a case in good general condition, where there is doubt between perforation and appendicitis without abscess, to operate.

When we consider that in about 85 per cent. of all cases of typhoid the organisms can be found circulating in the blood it is not surprising that occasionally abscesses form in those parts where the blood may be slowed in its course, such as in the liver, spleen and bones. In one-third of all typhoids there is a bacilluria and in a few of these the urine also contains pus, due to a pyelitis or a cystitis, but these pus conditions usually clear up early and need only the administration of urotropin to make the organism disappear. If not treated the bacteria may remain for years. A similar condition is found in the gall-bladder and bile passages, where typhoid organisms may be found as long as eighteen years after the disease. Of their rôle in the causation of gall-stones all are familiar, and we are all doubtless agreed that the only cure for gall-stones is to remove them surgically, but stones come as one of the late sequelae of typhoid, which with cholecystitis forms a group of diseases considered separate. On the other hand, occasionally we encounter acute conditions about the gall-bladder during the course of the typhoid fever that demand immediate attention. Cholecystitis with perforation or gangrene of the gall-bladder and peritonitis is a rare occurrence. Of thirty-six cases of perforation of the gall-bladder in the literature only four recovered. The symptoms are those of gall-bladder disease to which are added those of peritonitis. The following case gives a clear picture and fortunately terminated in recovery:

Miss N., aged 25 years, saleslady, was admitted to the Mullanphy Hospital on Dr. Elsworth Smith's service, Aug. 27, 1909, with a history of over a week's illness, beginning with nausea and vomiting and severe headaches and obstinate constipation. There was also

pain in her back and neck. She held her neck rigid. Tongue coated, lips and mouth dry, rose spots on the abdomen, palpable spleen. There was some complaint of bladder pain and the urine contained pus, doubtless an accompaniment of an old pelvic trouble. She was put on liquid diet and her bowels regulated. She was not very sick and her mind was clear but from the start there was pain in the abdomen. On the seventh day in the hospital (seventeenth day of disease) she had a large hemorrhage from the bowel with a fall of temperature below normal and there was a complaint of dizziness. Five days later there was a large tarry stool after having had several hours of severe abdominal pain with nausea. The abdomen was tender and the liver dulness was obliterated, but there was no drop in temperature and the pulse rate was not increased. For several days the pain in the abdomen continued, with relief after bowel movements, but the temperature gradually rose higher each day until it reached 104 at the end of the week, which was accounted as due to a pyelitis, the urine showing a great amount of pus. At this time there was also some tenderness over the gall-bladder region. An abundance of water was given by mouth and rectum and the condition seemed to improve for two days, when there was a chill with fever almost 105, pulse 100, intense pain over the gall-bladder and marked rigidity of the abdominal walls on palpation over the liver and gall-bladder region. Evidently there was an infection of the gall-bladder as well as the infection of the urinary bladder and kidney pelvis, so it was decided that the gall-bladder better be drained. Accordingly on Sept. 17, 1909, under ether, I operated through a right rectus incision and found a greatly distended gall-bladder wrapped about by the omentum, which was very edematous. We could not see any gross perforation of the gall-bladder wall, but from the way the omentum was attached to it and the presence of fibrin, undoubtedly the infection had passed through it and near the fundus of the gall-bladder was an area where we feared gangrene might supervene. On opening the gall-bladder, cloudy, bile-stained fluid spurted out. A rubber tube was inserted into the bladder and rubber tissue drains into the neighborhood. After the operation the temperature remained high for four days and then receded to normal. The convalescence was well established when three weeks later there was a moderate rise of temperature and pulse accompanying severe pain in the right iliac fossa with tenderness, muscle spasm and rigidity over the appendix. With these symptoms and a rapidly rising temperature we decided that operation was imperative and accordingly on Oct. 13, 1909, under ether we removed an acutely inflamed appendix and closed the wound. The fever dropped and for two days was normal, when with the accompaniment of a great deal of pain in the chest a pneumonia began in the right lower lobe with temperature reaching 104.5, but at the end of the week the danger had passed. At this time the back, which had bothered some in the beginning of the illness, again began to pain and continued to pain and remain stiff, a typical typhoid spine. Despite the spine, which was most annoying, the patient got up in a chair ten days after she was well of her pneumonia, and ninety-five days after admission went home well except for a slightly rigid spine. The gall-bladder sinus drained for several months. While still in the hospital two gall-stones were discharged through the wound and as they were faceted and of fair size they showed that they had rubbed against similar stones during the time of their development, but they must have existed long before the typhoid fever began.

The typhoid infection being almost always hematogenous, it has been rather surprising to

me that we have met relatively few cases of bone involvement, although Osler says that it is the most common sequelae. Undoubtedly it is the most troublesome one. It may appear at any stage of the disease, but in over half of the cases it comes on during convalescence and most often does not depress the patient's general health, but seems to be a local disease. As in ordinary osteomyelitis the tibia is most frequently involved, next in order the ribs, the femur, the ulna, but no bone is immune. In some cases there is extensive necrosis, but these are most unusual and the mildness of some cases is in my opinion the reason for considering so many of them as periostitis, when a majority of surgeons believe that bone infection, usually medullary, always precedes the periosteal infection, and have so found in the cases they have operated. An exception to this may be seen in the periostitis that comes in subcutaneous bones, possibly from an insignificant injury. There are frequently multiple bone involvements. The clinical course is rarely acute; a node will appear over a bone and subside under rest and local applications, to reappear after months and break down. When these abscesses are opened a sinus may persist for years but it is remarkable that after a very long period a culture from the sinus will show a pure culture of typhoid. The ribs and costal cartilage are involved and particularly in those past adolescence, and in one such case of cartilage involvement in a man of 40, in which a sinus had persisted for ten years, we obtained a pure culture of para colon bacilli. In studying my cases of osteomyelitis, I have been impressed with the fact that many of them were treated for typhoid fever in the beginning and later when a subcutaneous abscess appeared the true nature of the disease was disclosed. In none of these cases have we obtained the typhoid organism on cultures and the Widal always is negative. But in true typhoid osteomyelitis the organism is practically always recovered.

The joints are occasionally involved by a typhoid suppuration and of these one-half have resulted in pathologic dislocations.

There are at times abscesses over various parts of the body such as were seen in the ischiorectal region in the first case reported. They may be found either deep or subcutaneous in any part of the body and in about a third of the cases are shown as due to Eberth's bacillus.

I have seen two cases of parotitis during typhoid and in both of these the gland invaded broke down and had to be incised. As in most of these cases the infection was not due to the typhoid organism, but to an extension of the mouth bacteria through Steno's duct.

Humboldt Building.

THE OPERATIVE TREATMENT OF HEMORRHOIDS AND FISTULA IN ANO*

W. H. STAUFFER, M.D.
ST. LOUIS

THE OPERATIVE TREATMENT OF HEMORRHOIDS

When does palliation become unscientific? and when should operative measures be advised? are questions which are likely to be answered by the physician according to his experience and proficiency in treating diseases of the rectum and anus.

The patient and his environment demand our first consideration. In our desire to relieve him

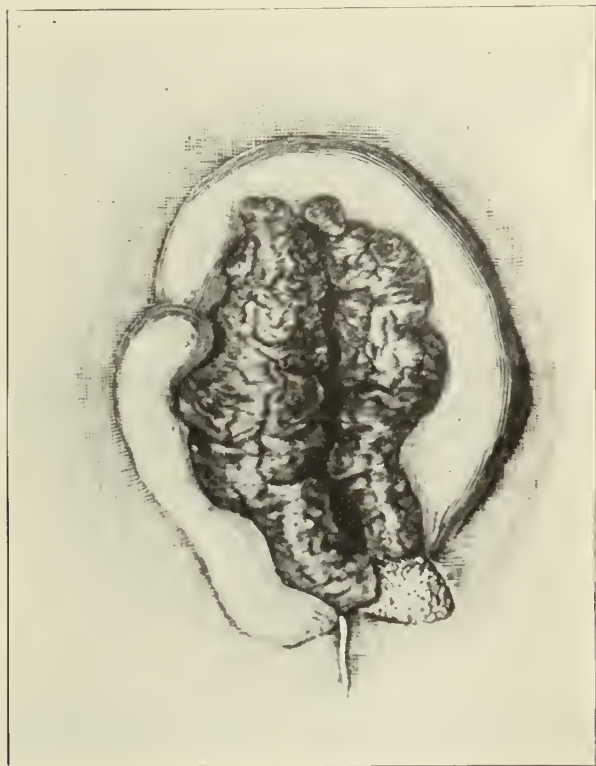


Fig. 1.

of a very distressing condition we must not forget that he is entitled to a truthful statement as to the diagnosis and prognosis. A proper understanding as to what may reasonably be expected when assuming charge of a case often forestalls much unpleasantness. Fortunately there are few conditions that yield more kindly and promise better results than the proper treatment of hemorrhoids.

The pathological condition must be definitely determined. How much of the anus and rectum are involved. If the parts are ulcerated a section should be submitted to a microscopical

examination to determine the presence of malignancy, syphilis or tuberculosis.

At least thirty-six hours should be taken for the preparation of the patient for operation, the intestinal canal being thoroughly emptied and the parts rendered as nearly aseptic as possible. The use of local anesthetics for operative interference in this region has kept pace with all departments of surgery. Like all other good things there is danger of overdoing. It has been conclusively demonstrated that they are by no means devoid of danger however skilfully employed. Their use is largely responsible for incomplete and bungling work. The performance of so-called minor operations in the office of the surgeon, however well equipped, with the exception of external hemorrhoids, is not to be encouraged. It is impossible to prepare your patient properly or care for him adequately afterward.

For general anesthesia I prefer and use ether, unless contraindicated. The patient should be entirely under its influence before beginning any

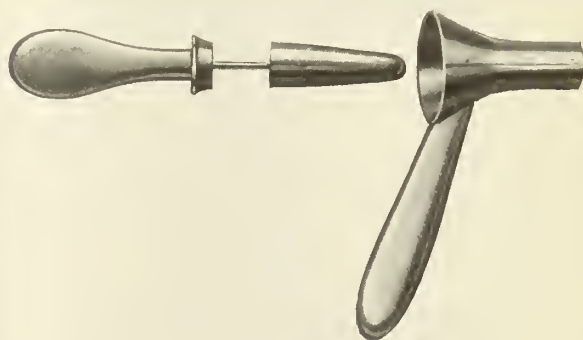


Fig. 2.—Anoscope.

operation and it is always well to advise the anesthetist when you are ready to begin so that due caution may be exercised.

After operating on over eight hundred cases of hemorrhoids without paralyzing the sphincter ani, I have arrived at the following conclusions: First, dilatation exceeding one inch is unnecessary as a preparatory step in any operation on the rectum or anus. Second, needless dilatation ruptures the muscle fibers, separates the nerve endings, invites infection, increases post-operative pain, frequently produces partial incontinence and prolongs convalescence.

The operation to be selected depends on the three following factors, named in the order of their relative importance: 1. Complete restoration of function. 2. The time required. 3. The pain produced.

The various operative methods may be divided into three classes: 1. Complete excision of the pathological tissue. 2. Devitalization and tissue necrosis. 3. Partial excision and devitalization.

* Read before the St. Louis Medical Society, March 14, 1914.

The operation of excision by means of one of the various methods devised and the union of the parts by catgut sutures, is no doubt the ideal method, but the great difficulty in procuring an



Fig. 3.

aseptic field and keeping it so will always limit this procedure to selected cases, such as mixed and external hemorrhoids, especially those associated with prolapse of the mucous membrane. Only the pathological tissue should be removed, and no attempt should be made to substitute a

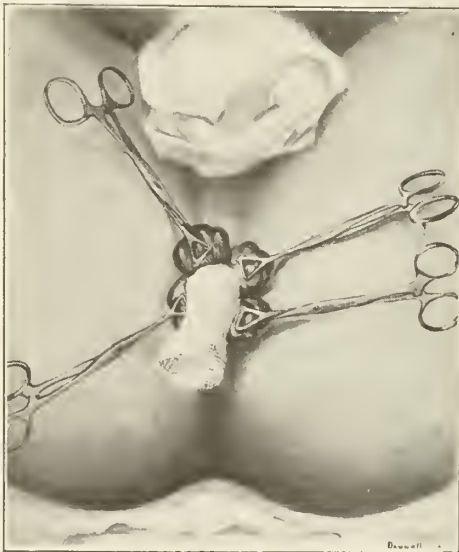


Fig. 4.

major operation when a minor one is indicated. All bleeding must be controlled and the stitches so placed as to secure good coaptation, and be kept clean without causing undue discomfort.

The clamp and cautery operation continues to be employed by a few of our older general surgeons and gynecologists. It is a significant fact that very few physicians or surgeons have ever suggested or allowed this method to be employed when seeking relief for themselves or their families, while I have definite knowledge of a large and rapidly increasing number who have sought the safer method. The technic of the operation is known to some of you and can easily be ascertained by consulting some of the dusty volumes of our recently acquired library; suffice it to say that the ultimate result and the comfort of

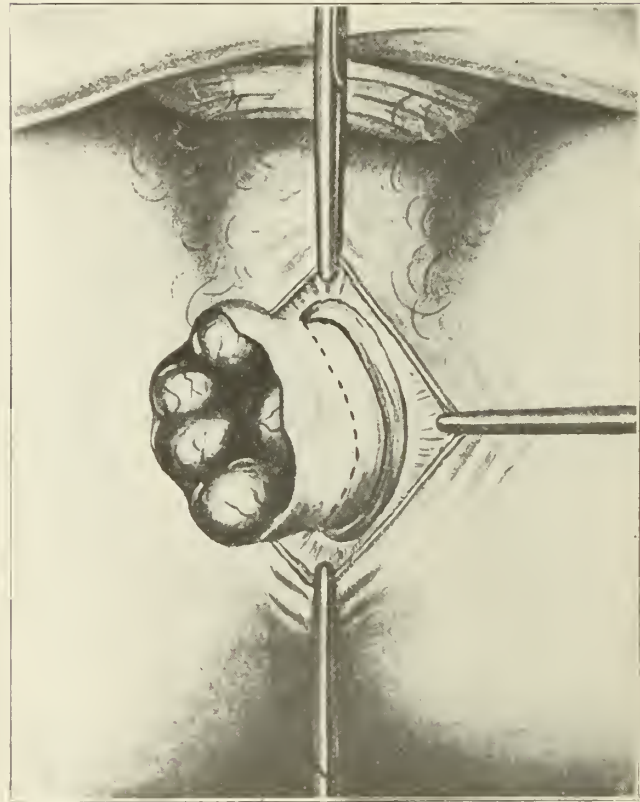


Fig. 5.

the patient depend more on its proper performance and after-treatment than any minor operation in surgery.

The local application of escharotics by the aid of the electric current or hypodermic needle as a means of causing devitalization and consequent tissue necrosis is unjustifiable in any event. If there was ever any excuse for this method of torture it has not obtained since the practical application of local anesthesia.

It is not my purpose to describe the many devices and ingenious methods evolved by the fertile brain of the American surgeon for the relief of this distressing condition. The merits

of any operation can only be properly judged by considering both the good and bad results as achieved by a competent operator. It is unfair to any operator or operation to select the weakest point and criticize the work when poorly done by a novice. Scientific honesty should actuate our motives, and a sincere desire to employ the best methods in each individual case entrusted to our care. The tendency to implicit and lazy following of authority is perhaps the greatest menace to medical progress. Dr. Ira Remsen has well said: "The true scientific investigator has no bias. He is in the jury; he is to hear the evidence and give his decision in accordance with the facts."

In my last five hundred cases of hemorrhoids requiring surgical interference, about 25 per cent. were operated by one of the approved

The difficulty of fixing the mucocutaneous line in the Whitehead operation, and the pain produced in keeping the wound clean until union has taken place, must not be overlooked. An inversion or an eversion often causes much discomfort and is not easily corrected.

The ligature operation, as performed by the ancients, in many respects resembles the operation as done to-day. It comes down to us recommended by such of the ancients as Hippocrates and Galen. The majority of authors in later years and up to the present day commend it as being one of the best operations for the cure of hemorrhoids. For instance, it is endorsed by Sir Astley Cooper, Burks, Cripps, Van Buren, Bodenhamer, Allingham, Mathews, Straus, Miles, Mummery and others. The re-



Fig. 6.



Fig. 7.

methods. The unsatisfactory results could easily be traced to the following: 1. The attempt to adapt the pathologic condition to the operator's pet method instead of selecting the operation best suited to the individual case. 2. The improper post-operative treatment.

The clamp and cautery operation cannot be used unless a general anesthetic is employed. The cicatricial tissue produced by a burn is less elastic and more predisposed to ulceration and malignancy than the cicatrix found after any cutting operation. Therefore this operation should never be used when the entire circumference is involved unless a constriction is desired. Post-operative hemorrhage is more frequent in this operation than in any other, unless the technic is just right and the patient does not get out of bed until all danger is past.

sults which have followed this operation deserve the highest commendation.

Hemorrhoids are naturally classified as follows: First, external; those found external to the sphincter. Second: externo-internal; when found in the grasp of the sphincter and involving the middle and inferior hemorrhoidal veins. Third: internal; those presenting no external pathology and being connected only with the superior hemorrhoidal vein.

The external variety can easily be removed by the aid of local anesthesia, employing cocaine, novocain or sterile water. A ligature is not generally indicated.

The second classification presents a very interesting pathologic condition and the future comfort of our patient is largely determined by the operation selected for his relief. Fig. 1 illus-

trates a case in which no normal tissue is found between the tumors. We have here a prolapse of the mucous membrane together with a neglected case of hemorrhoids; any method except complete excision of the diseased tissue will fail to give the patient permanent relief.

I have modified the usual methods of excision and ligation long in use and combined them for the treatment of the conditions above noted. If

On the third or fourth post-operative day the devitalized tissue below the suture drops off and the mucous membrane and skin coapt.

Nature places the mucocutaneous line at the proper place and I have never had an inversion or eversion in the five hundred cases I have operated by this method.

The tube is removed on the third day, an enema or cathartic administered and the patient directed to take a tub bath every day. After the sixth or seventh day he is taught to use my applicator and dilator (Fig. 7) after each defecation. He is now ready to leave the hospital with instructions to call at my office until fully recovered.

The advantages of the method are: 1. Complete restoration of function. 2. Absolute prevention of post-operative hemorrhage. 3. Simplicity of method and after-treatment. 4. The patient remains in bed three days and from work from seven to ten days. 5. Very little pain after the first twelve hours. 6. The permanency of results.

When there is any normal tissue between the hemorrhoids and in well-defined internal piles (Fig. 8) each tumor is transfixed separately either by the aid of local or general anesthesia, and the post-operative treatment conducted as outlined above.

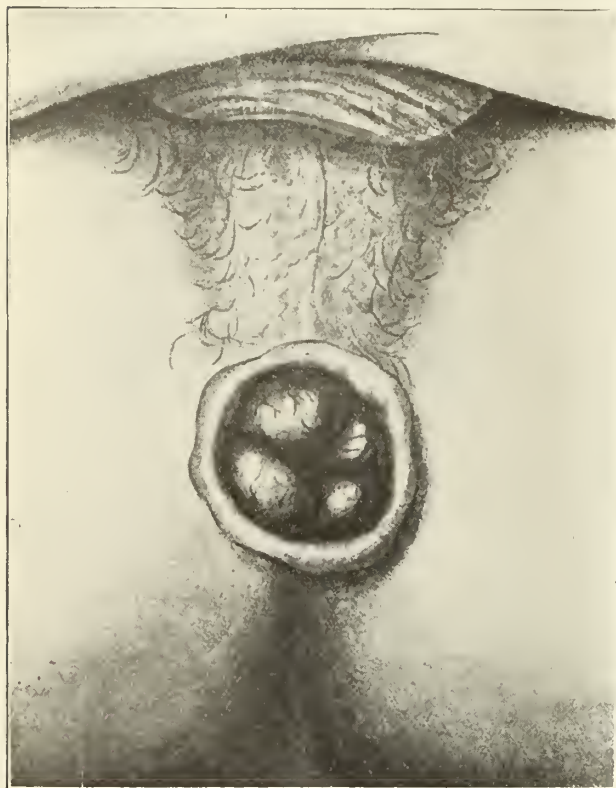


Fig. 8.

the patient has been properly prepared no irrigation is necessary on the operating-table, thus avoiding much unpleasantness to the operator and adding materially to the comfort of the patient after he is returned to his room.

The patient is placed in the lithotomy position and the anoscope with gauze introduced (Figs. 2 and 3). By removing the anoscope and applying slight traction to the gauze the abnormal condition can easily be everted and forceps applied (Fig. 4). An incision is now made around the entire circumference and by the aid of gauze dissection the sphincter is exposed. A mattress suture is now placed as represented by the dotted line (Fig. 5) and all the pathologic tissue is removed below the suture. A small tube is placed in the rectum for drainage (Fig. 6) and the escape of flatus, thus adding much to the comfort of the patient. The tube also serves for the painless administration of a post-operative enema should this be deemed necessary.

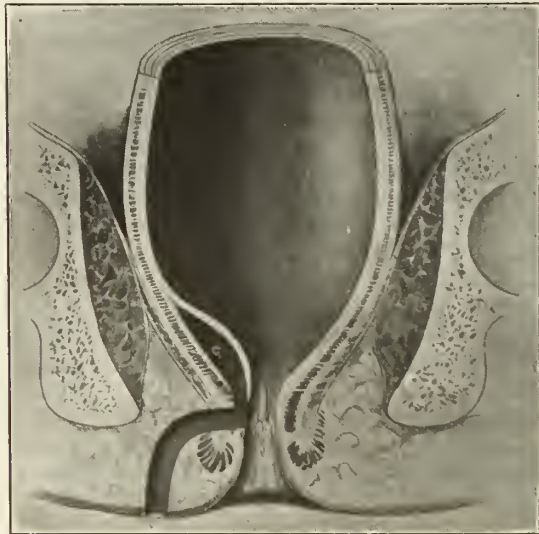


Fig. 9.

THE OPERATIVE TREATMENT OF FISTULA IN ANO

A fistula in the proper use of that term is either complete or complex. By a complete fistula we mean a sinus connecting an internal organ or cavity with another cavity or organ or with the external part of the body. By a complex fistula we designate two or more organs connected with each other and the external sur-

face. The second variety is generally designated by the name of the organs involved, as recto-vaginal fistula.

The etiology is either traumatic or infectious.

Any operative procedure should be based on a definite diagnosis. We should not forget that the patient is an individual as well as a case, and it goes without saying that no reputable surgeon will guarantee a cure.

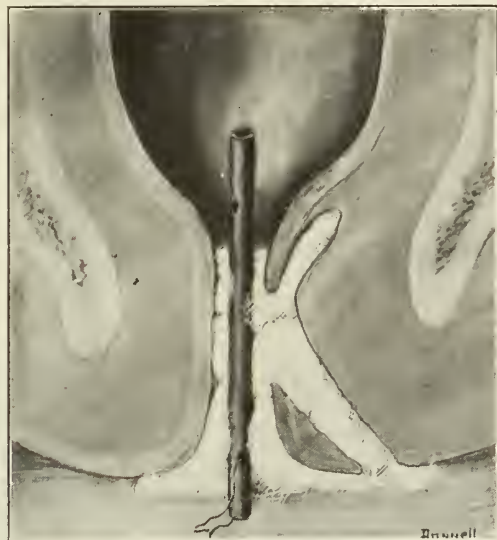


Fig. 10.

No one operative procedure is applicable to all cases, and I know of no pathologic condition where a surgeon's judgment and mechanical skill count for more than in these unfortunate patients.

The complete restoration of function must always be the first consideration. A rectal fistula, however undesirable, is to be preferred to an incontinence. Every patient presenting himself for treatment knows of someone who has had an unfortunate result.

Most of our text-books teach us that there is no danger in dividing the sphincter, providing we take the precaution of not dividing it posteriorly nor more than once at any one operation. Overdilatation and mutilation of the sphincter as a preparatory step is another cause for incontinence. The nerve endings terminating in the sphincter are torn from the muscle fibers and complete restoration of sensation seldom takes place. It is obvious that if the nerve center controlling the act of defecation is not duly informed it can not perform its function.

When the internal opening is more than two inches above the sphincter or if there are any pockets extending from the original fistulous tract (Fig. 9), I have had very satisfactory results in five cases by resorting to what I des-

ignate the two-step operation. The following clinical history is typical and will serve to illustrate the mode of procedure:

Mr. A., traveling salesman, aged 53, was referred to me by Dr. N. on March 13, 1913. Patient had complained of pain in the perineum for about a week, but did not call the doctor's attention to it until the pain became unbearable. When I first saw him at the hospital at 11 a. m. I found him with an organic heart lesion, temperature 105 F. and a general septic condition. He informed me that on his way to the hospital he was compelled to yield to what he thought was a bowel movement, after which he was much relieved. Under the influence of ether at 5 p. m. of the same day an examination revealed a large ischio-rectal abscess involving the entire right fossa, extending posteriorly to the tip of the coccyx and anteriorly to the right external abdominal ring. The opening into the bowel was four inches above the sphincter. A large quantity of pus had escaped through this opening and only about a pint was liberated by a free incision in the perineum. This incision extended from the internal opening to but not including the sphincter. All the pockets were opened and carefully sponged with gauze. A drainage tube was placed in the rectum and the cavity lightly packed with gauze (Fig. 10). The temperature became normal in four days. The wound was carefully irrigated and re-packed every day. On April 6 a small fistula near the sphincter and the hemorrhoids were still in evidence. By the aid of novocaine a ligature was placed around each hemorrhoid and the sphincter ani divided (Fig. 11). The patient was able to leave the hospital in ten days with complete control of the sphincter ani.

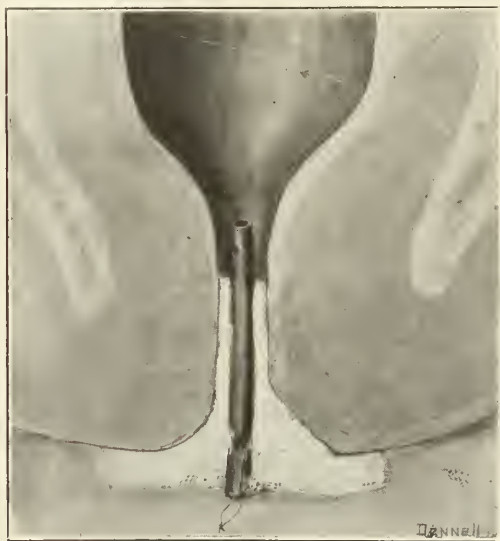


Fig. 11.

The advantages claimed for this method in cases similar to the one outlined are: 1. Complete functional recovery. 2. The minimum extension of sepsis, as the least possible amount of surgery is done at the first operation. The avoidance of a large surface of cicatricial tissue which predisposes to ulceration and malignancy. 3. Very little pain after the first few days.

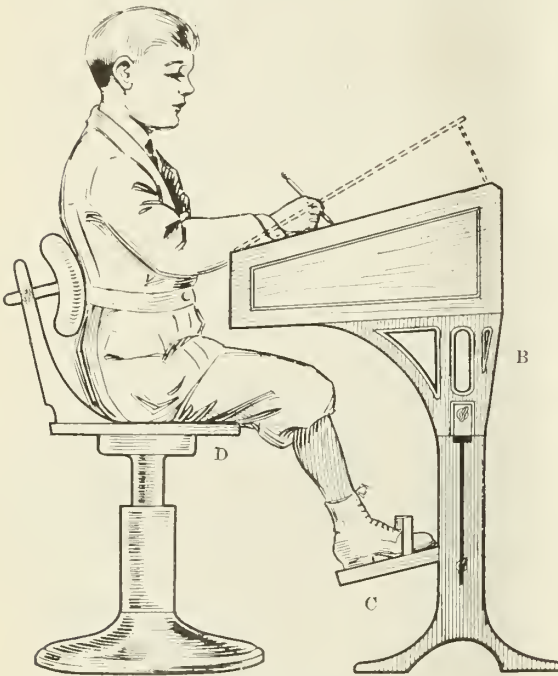
203 Humboldt Building.

PREVENTION OF DEFORMITIES IN SCHOOL CHILDREN *

B. BELOVE, M.D.
KANSAS CITY, MO.

In Kansas City and a great many Western cities, the chief aim of school hygiene has been directed toward the prevention of infectious and contagious diseases. Prevention of deformities has been sadly neglected. Evolution is a slow process. This is best illustrated by Jack London's fanciful prehistoric man, who once found a broken gourd which he filled with water, drank

DIAGRAM OF THE SEAT AND DESK TO PREVENT DEFORMITIES AND OTHER CONDITIONS ARISING FROM FAULTY SCHOOL FURNITURE



A. Back of seat with convexity to fit the physiologic curve of the back, adjustable up and down as the pupil may require.

B. Top of desk, adjustable up and down and tilting, as the size of pupil may require.

C. To keep the feet parallel to give proper rest to the feet, to avoid valgus and other deformities.

D. Seat of chair not longer than length of thighs.

some and spilled the rest thoughtlessly. It took him a long time to realize that to fill the gourd with water and carry it to his cave would be advantageous, for at night when he dared not leave his cave for fear of wild animals, he would be able to quench his thirst at his convenience and pleasure.

One grows somewhat pessimistic when realizing that all these centuries we have been, through ignorance, making many a legion of cripples. There is an excuse, however. We did not know

the facts. The idea of preventing deformities had not been created.

Kansas City could not possibly have had the steam engine before it was invented somewhere else, but how would it look for Kansas City to be still refusing, in mule-like fashion, the use of the steam engine?

For several years we have been agitating the question of preventing deformities in schoolchildren, without getting any encouragement. Our voice was a voice in the desert. One of the main objects of school hygiene should be the prevention of deformities. The persistent maintenance of an improper attitude by children, especially when sitting during school hours, has been demonstrated by a great many orthopedists to be the cause of all sorts of deformities and disablements. For example: scoliosis, kyphosis, weak feet, flat feet, neuritis, rheumatism, orthotic albuminuria, compression of the heart, displacement and inflammation of vis-



Arrow indicating position favoring development of kyphosis, eye-strain and compression of chest.

cera, disturbances of vision, tuberculosis, and a great many other conditions.

When we consider the complications and pathology that ensue as a direct result of the above mentioned diseases and disabilities the picture is by no means bright and one not particularly complimentary to our understanding of duty to the unfortunates of this world.

The report of the Berlin orthopedists of 1906-7 has shown that among 35,481 children just beginning to go to school, only 833 children (2 per cent.) were deformed. The statistics of Schmidt and Bonn taken on schoolchildren later in school life have demonstrated that 52 per cent. of girls were affected with curvature of the spine and other disabilities. These statistics, even if

* Read before the Jackson Medical Society, Feb. 3, 1914.

taken with the allowance for error, demonstrate clearly the influence of the school life on children. As a result of painstaking studies and experiments that have been made, the European school authorities of the civilized nations set about changing the whole system of school life. Not only were general hygienic measures instituted, like games and sports, but the school seats



Arrow indicating position favoring development of kyphoscoliosis with eye strain. Rings indicating various faulty postures.

as a whole were changed and remodeled in the effort to provide school furniture that would aid the pupil to maintain a correct position in sitting.

Boston was the first American city to step up alongside Europe in this respect. The adjustable school chair adopted by the Boston School Commission in 1904 is quite efficient, although it

uncomfortable and may result in various disturbances of locomotion. The back of the chair should not be above the shoulders, with an arch whose convexity is to support the natural, so-called physiological, curve of the back; and in that way adequate support will be given to the back muscles, such as the erector spinae, multifidus, etc., which otherwise are stretched and weakened, giving rise to deformities, sacro-iliac



Arrow indicating position of feet favoring the development of valgus deformity.

strains and diseases, and even occipital headaches, since the erector spinae muscles are directly connected with the occiput by accessory muscles.

2. The back of the seat should slope slightly backward, forming an angle of 100 to 110 degrees. The back of the seat should be movable so as to fit the size of each individual pupil.



Ring indicating position favoring development of left convex scoliosis (the pupil left-handed, writing with the left hand).

Arrow indicates positions favoring the development of right convex scoliosis (the pupils right-handed, writing with their right hands).



Arrow indicating position favoring the development of left convex scoliosis (the pupil left-handed, writing with the left hand), and eye-strain.

Ring indicating position favoring the development of right convex scoliosis (the pupil right-handed, writing with right hand).

cannot be described as perfect. The principle in the construction of a hygienic chair and desk should be as follows:

1. The seat of the child should not be longer than the length of the thighs, otherwise the child's limbs are held in extension, which is

3. The distance from the top of the seat to the top of the table should be one-eighth the height of a girl and one-seventh that of a boy. This difference with reference to seat is due to the fact that boys have longer legs in proportion to height than girls.

4. The writing table should be at a height proportionate to the height of the person sitting. It should be shifted up and down to make adjustment possible.

The Boston desk has no foot-rest. In my opinion it is of great importance to have a foot-rest and keep the feet parallel with and at right angles to the body so as to give proper rest to the body and feet, thus preventing various deformities, such as valgus, varus equinus, etc. The inclination of the top of the desk should be a slope of two inches or more. This is important and directed toward the prevention of eye-strain. Quite frequently a large-sized pupil has to flex the head and neck on the chest to accommodate the vision, as shown in one of the illustrations.

The top of the desk being movable, the inclination can be controlled and fixed according to the needs of each individual pupil. One may get an idea, from this rather cumbersome description, that such school furniture would be difficult to manufacture and very expensive. Not at all. Different kinds of orthopedic school furniture are already on the market at the same cost as the faulty furniture used at large.

A question may be asked, What about the congenital deformities? What effect can proper furniture have on deformities due to embryologic defects?

Many congenital cases can be treated successfully, but when these children enter school where they are put into faulty chairs the deformity is liable to occur. In the limited number of cases of congenital scoliosis and club-foot under my observation the deformities in early infancy have apparently yielded to simple bloodless methods.

One who has had any experience in orthopedic work knows the unpleasant surprises that are in store for one who thinks that a deformity after being cured may be left to fate. Such patients should be under observation at frequent intervals and should be watched as they grow to adult life, and everything in their environment should be so constructed as to reduce the chances for recurrence to a minimum.

Thus the relation between school furniture and the school child if once understood must result in the inevitable change of the whole system of school equipment; and this, let us hope, will occur soon and be nation-wide. Let it be the ambition of every medical society and every progressive layman and physician to install the most modern furniture in our public schools so that we may be favorably compared with any civilized nation in the world in protecting the young generation, and decreasing the number of disabled and deformed among the future citizens of our country.

DISCUSSION

Dr. Belove, in closing:

I want to extend my thanks to Mr. Cammack, Superintendent of Schools in Kansas City, for allowing me to have photographs of the children taken during school hours. I thank Dr. L. A. Marty for taking these pictures.

I want to say with all seriousness that the Kansas City schools are in no way inferior to most of the schools in this country and our school authorities are efficient and progressive. This does not imply, however, that our schools are perfect and there is nothing upon which to improve. In fact, nothing exists that can be called perfect; "near perfect" is the best that human mind can reach. We were sending messages by wire but the human mind was not satisfied and hence wireless telegraphy was invented.

The adjustable school furniture used in the progressive European cities has undoubtedly decreased the number of deformities in those cities. In Europe not only physicians but city mayors and educators are interested in this phase of school life.

Some gentlemen here expressed their fear that such a seat and desk would be like a prison to the child; that it would tend to atrophy the muscles; that what the child needs is fresh air and exercise.

Now, I think this misunderstanding arises from the fact that I am not an artist and my diagrammatic drawing shown on the screen tonight has conveyed a false impression. This seat and desk is not a brace to be worn by the child to cause atrophy of muscles. Let the child have as much fresh air and exercise as possible—the more the better, but during the time the child is compelled to sit let the child be helped to maintain the proper position and not allow deformities that have been cured to recur and new ones to develop. That is what the adjustable seat is supposed to accomplish.

One gentleman remarked that he does not see the necessity of putting all children in adjustable seats because some of them may develop deformities. This must have been the argument against vaccination in the early days.

Anything that can be prevented should be prevented; if the adjustable desk and seat have proved a means to decrease the number of eye-strains and deformities then every progressive community should have them. Where the adjustable furniture is used the children feel more comfortable than otherwise. As to the expense of such a change it would be less than the cost of treating the various conditions arising from the furniture used at present.

Shukert Building.

1. Breadford and Lovett: Orthopedic Surgery.
2. Zentralbl. f. Chir. u. Mech. Orthoped., December, 1909, p. 562.
3. Ztschr. f. Orthoped. Chir., Bd. xxvi, Hft. 4.
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THE EARLY RECOGNITION OF THE FEEBLE-MINDED IN THE PUBLIC SCHOOL *

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Within the past few years probably there has been no one topic more widely discussed from the point of view of public interest and welfare than that of the mentally defective classes, their delin-

* Read before the St. Louis Medical Society, Jan. 17, 1914.

quencies and limitations. The reasons are not far to seek. The persistent, intense, efforts which have been made to reach a solution of the problems involved in connection with vice, crime and dependency have led to a common and unanimous conclusion. These delinquencies, as well as other similar antisocial trends, it has been recognized, owe their origin to mental deficiency. Feeble-mindedness of varying degree is accredited the fundamental cause of their existence. It is indifferent, insofar as this conclusion is concerned, whether one approaches the problem from the point of view of the social service worker, the juvenile court, the educator, or the church, for the efforts of all these to find the cause of the difficulty ultimately meet on the common ground of feeble-mindedness. It is an obvious fact that if any plan to better the existing conditions is to be successful, it must aim to attack the roots of the evil, the mental deficiency underlying the state of mind which fosters the antisocial attitude.

This realization of the fundamental cause, contributed to from every angle of study, has directly occasioned the focusing of attention on the study of feeble-mindedness itself, because, and it requires no proof to demonstrate the fact, one must know the material with which he has to deal before there can be any hope of aiding the situation. That this situation is formidable and one worthy of careful consideration, may be realized if we view it from the quantitative phase alone. It is estimated that there are in the United States to-day about three hundred thousand feeble-minded, and of this number fully two-thirds are at large among society.

One of the most potent results of this continued research into causation, and, at the same time, one of the most important factors which must be taken into account by any scheme proposed for betterment, is the rapidly growing appreciation of the fact that feeble-mindedness is dependent on heredity. Not more than 30 per cent. of the instances can be traced to another group of causes which are of an accidental character and may explain certain cases of toxic or traumatic origin. Even in this group it is not infrequently possible to trace a fundamental defect, on which basis the toxin or trauma has acted as an exciting factor.

From the nature of the chief cause underlying feeble-mindedness, that is, heredity, it becomes a self-evident conclusion that the ideal treatment of the situation consists in the prevention of the further generation of the same type. Such is the ideal goal of the eugenic movement which, with popular enthusiasm, has swept broadcast over the country within a comparatively brief time.

There are mainly three lines along which attempts at progress are being made—through the control of marriage among the unfit, through

sterilization and through segregation. A fourth, and by no means the least important manner of approach, is to be recognized in the very general attempt which is being made to educate the average normal citizen to that point where he himself may appreciate the danger and menace in further neglect of this problem. It is the taxpayers who will eventually supply the moving force designed to limit the increase of defectives by the speediest means. The first method does not seem at present to offer more than a relatively small contribution to success, because it must be remembered that the defective will have offspring without troubling with marriage details. Sterilization, though inexpensive, harmless and efficient in the given case, is to a degree impracticable as a general measure. It becomes impossible to practice it on just those whom we need most to control—the feeble-minded of comparatively high mental attainment, the morons, because at the present time there is no way provided for locating these individuals among society. The impracticability of the measure is apparently demonstrated by the observation that of the eight states wherein the sterilization of defectives has been made a law, in not one is its practice actually efficient to-day. In segregation, whether by colonization or by other type of institutional control, it is believed exists the ideal method of attacking the problem. The prime argument against this is the expense, but though the initial cost be high, the ultimate saving to the community is far greater than can be by the present system. Colonization with sterilization offers the most effective solution now at hand. When an individual has thus been segregated his legal status is thereby established and sterilization becomes practicable, at least, insofar as those segregated are concerned.

However, it is not the purpose of this presentation to argue for the different methods of after-care, but rather to present in a general way a few of the principles, merely as introductory to a pointing out of the necessity and the manner by which these feeble-minded may be early recognized.

The great prominence which the sociologic and economic features necessarily occupy in this work has served to throw somewhat into the background the fact that this is fundamentally a medical problem. It is just as much within the province of the medical profession as is the care of the insane, or for that matter, the control of an epidemic of infectious disease. It is primarily a problem in preventive medicine, and, therefore, one with which every practicing physician must, in a measure, become familiar. It is the physician who first comes into contact with the feeble-minded; he is sought out by the family for advice regarding the individual and is looked to by the community to provide directions for the care of this class as a whole. It is his privilege to see

the case at that early age when a full recognition of the condition will be of the greatest value, not alone to the individual and to the family, but at the same time will render the largest service to the community by the anticipation of the evils which inevitably must accompany this enfeebled mental state. This is true because we know that the individual may be benefited, or at least, protected, but can never develop into a normal citizen, and because we know that he, and more especially she, constitutes a large source of potential danger to the community through proneness of the class to propagate the same type.

We are often asked, Who are the feeble-minded and by what standards are they, as a class, to be judged? For many this term comprises only the idiots and imbeciles, persons whose mental stock is so low that their defectiveness is patently apparent. But these two groups form only a part, and, unfortunately, it is this part, so easy of detection, that occasions the least of our difficulty. The class must be expanded to include, besides the idiots and imbeciles, that larger group of individuals who superficially present an appearance of average normality, but who, as they approach adult years, are found to be unable to conform to the necessities of society, and who, in most instances, may be shown by appropriate tests to possess a mental age less than their years. These comprise the large army of one-sided, asymmetrically developed individuals, who, with their antisocial and asocial tendencies, go to make up the horde of ne'er-do-wells, vagabonds, delinquents and criminals. This group of the feeble-minded are included under the term moron. They comprise an uncertain, unstable lot, suggestible and easily influenced, subject to the most extreme emotional discharges on the slightest provocation. And, in this quantum of floating, unfixed affect is inherent their potential danger. They exhibit no fixity of purpose, no tendency toward a concentration of effort on a desired object, but react without plan, reason or foresight on the spur of the moment.

If we look on those persons as feeble-minded "who may be capable of earning a living under favorable circumstances, but are incapable from mental defect existing from birth or from an early age (a) of competing on equal terms with their normal fellows, or (b) of managing themselves or their affairs with ordinary prudence" we have what has been termed the "social" conception of feeble-mindedness. On the other hand, the so-called "psychological" conception limits the feeble-minded to those who, by certain empirical mental tests, are shown to possess a mental development below that which for their age is considered normal. By the former the feeble-minded are recognized by the result of the defect, after the damage has been done; whereas, by the latter there is offered a means by which preven-

tion may, to a great extent, be practiced and the damage which is to be expected, anticipated. As a matter of fact, these two conceptions do not stand for differences in point of view, as has been contended, but merely represent different installments of the same story. The problem in the main necessarily must be a social one, but the psychological procedures are only the implements by which we test our material before turning it over to society. We aim to test individual mentality as the automobile manufacturer tests his product before it is turned out of the shop. To set up a social conception of feeble-mindedness as contradistinct and opposed to a psychological, not only attempts a non-existent distinction, but adds confusion to an already difficult situation.

The psychological tests to which reference has been made are those devised some years ago by Binet and Simon after many years of study and first generally applied as a result of legislation providing for the mental standardization of French schoolchildren. The tests, as now used, have been altered and adapted to American children by several workers. It is assumed that the tests themselves are sufficiently well known to require no detailed mention and only a brief exposition of their fundamental principles will be given at this time. They were worked out along empirical lines on a comparative basis. Average normal children were examined, and with the data thus obtained it was determined what degree of mental development a child of a given age might fairly be expected to have attained. The tests prescribed for a certain mental age should all be passed by a normal child of that chronological age. They are selected to range over the whole field of developing intelligence and give one a general conception of the whole mental capability of the individual examined. As might be expected, certain precautions and restrictions are essential to the successful application of the tests, but it is not necessary, as was for a time believed, that their use be limited to the expert psychologist alone. They are not so esoteric that they may not be employed by anyone who has sufficient interest and patience to exercise an adequate amount of care in their application and who will acquire the information essential to the correct interpretation of the results. When these requisites are complied with most remarkably uniform results are to be obtained.

A correlation of the results of these tests with existing types of feeble-mindedness was next made. This correlation is based on the assumption that the development of language might serve as one criterion of the intellectual level of the individual. By this correlation with mental age three different grades of feeble-mindedness are recognized. First, the idiot, having a mental age of two years or less and who cannot use

spoken language; second, the imbecile, with a mental age of from three to seven years and who can understand and use spoken language to a varying degree; third, the moron, who has a mental age of from eight to twelve years and who not only can understand and use spoken language, but also may learn to read and write. Beyond the mental age of twelve the feeble-minded do not seem to develop regardless of their chronological age. An individual, according to this scheme, is considered feeble-minded whose mental age is three or more years less than the chronological age. If the discrepancy between the mental and chronological ages is less than three years, the individual is classed as simply retarded or backward. By this ability to classify according to the mental age the tests gain a greater value than that which is derived merely from the recognition of the feeble-minded person as such.

A knowledge of the mental age is of prime importance in determining along which lines education should be attempted and what degree of success may be expected, and for this reason. By no possible known means can a child with the mental age of five be taught the things which a normal child of seven knows. However, you may teach a feeble-minded person with a mental age of five many more things of the normal five-year grade than the average normal five-year old child usually knows. In other words, you may broaden the knowledge of this mentally five-year old feeble-minded individual on that particular mental level, horizontally, one may say. You may teach him to grasp the knowledge that is customarily possessed in sum by three or four normal five-year-old children, but you cannot increase the depth of that knowledge, that is, you cannot add to it in a vertical plane. A recognition of this teaching limit, as one may easily understand, might readily prevent a great loss of energy and waste of valuable effort which otherwise would be expended in an absolutely worthless endeavor.

Now that we have these mental tests, the value of which the consensus of opinion forces us to admit, where is their application to be made so that practical results may be derived? It is desirable, and even necessary, in order that the present condition be bettered, that the feeble-minded be recognized early, before that stage in their career when their abnormal tendencies have led them into conflict with the dictates of society, and before they have burdened the community by the multiplication of their kind. The logical answer suggests itself—in our public schools and at the earliest possible stage of their school life these mental weaklings should be recognized. Were this done the juvenile court might not be able to record thousands of arrests annually, as is now the custom. It would be less expensive to

the city to segregate these individuals early in suitable institutions as feeble-minded than later in reformatories and prisons as offenders against the law. Then too, the absurdity of punishing as a person of twenty-five years an individual who has the mental age and corresponding responsibility of child of ten or twelve is apparent.

Medical inspection of public schoolchildren already has been adopted by many cities, but as yet comparatively few carry this farther than the examination for the detection of physical defect or disorder. It must be remembered that retardation in mental development may be dependent on discoverable physical causes, and a thorough physical examination is most certainly advisable. But this is not sufficient in itself and the mental grade should merit an equal amount of attention. We are no longer justified in attempting an accurate judgment of the functional character of the brain by the outward conformation of the skull. That the proposition of examining the mental development of public schoolchildren is practical is attested by the valuable results which have been obtained by this method as used in some of the large city schools of this country. In view of this success there is no further adequate reason for the delay in its application by those cities which have held back for one or another excuse.

Let us start with the basal assumption that those mentally deficient should be removed from the classes in the general public schools. The question then arises, How are we going to detect those who are mentally deficient? Secondly, What is the degree of the defect, if present? Thirdly, What disposition is to be made of those found to be mentally deficient? It might be desirable to subject all public school pupils to a mental test as a matter of routine not later than the age of ten years. This plan, however, for the present seems hardly feasible, and some degree of selection appears necessary. It is possible to examine mentally all pupils who, for any reason, be it failure in class-work or because of physical appearance, create a suspicion of mental abnormality. This much can and should be done. Such an examination by the Binet-Simon scale will at once serve to determine if a defect is present and what the degree of such defect may be; that is, the mental age of the individual according to which the only ultimately satisfactory disposition of the case can be made.

For practical purposes it is advisable to recognize two main groups of backward pupils. First, those who have a normal mental ability but who are retarded to a slight degree in their mental development because of some more or less remediable cause. Our present school system is based on the assumption of mental equality among the pupils and the courses mapped out in accord with the ability of that comparatively small por-

tion of the more able ones. Thus the mass struggles along at the upper limits of capability and a slight interference with school attendance or the intervention of some other similarly active element may cause them to drop from the class, to repeat. For this group it is important to recognize that the cause of the retardation is largely removable or remediable, and that when once the cause is removed the child may, by the appropriate attention and oversight, regain its place mentally among those of the same age. Secondly, we have the group of the mentally deficient because of some fundamental brain defect which is not curable. These are the feeble-minded and for whom we can hope to do nothing in the way of graduating them from school as average normal citizens. Two per cent. of the pupils in our public schools, because feeble-minded, are unable to take their place in society and provide for themselves.

Both of these groups of the unusual should be removed from the general public schools and segregated; the first in special, ungraded schools, and the second in institutions or colonies for the feeble-minded. By this division the former will be enabled to receive the proper individual and personal instruction fitting to their case, and the latter will be removed from society at large into an environment suitable to their condition and at the same time protective to the community interests.

Special ungraded schools are now established in many of the large cities; the criticism is not of the school itself, but of the method by which its pupils are selected. At the present time a similar method is used for the selection of the pupils for these special schools as is later in life employed to recognize the mentally deficient; that is, their ability to keep abreast of that which is considered the normal, the application, as you see, of that method which has been evolved from the so-called social conception of the feeble-minded. But, as has been pointed out, a great economic waste accrues from the application of this method in later life and the same is more or less true when it is employed during the school age. Let us pause for the moment to consider its working in the public school. Suppose a pupil seems unable to keep up with his class—an attempt is made to keep him in the regular school by special effort. For a period of from a few months to years this trial is continued, when finally hope is abandoned and this pupil is admitted to the special school. This method serves as an example of wasted effort on the part of the school system as an organization and on the part of the teacher in particular in a well-intended but misguided endeavor to educate a supposed latent mentality, whereas in reality mentality was not latent but absent. And further, suppose the pupil thus tried out is

finally taken into the special school. What criterion have we by which we may judge accurately of the mental capacity of that individual? Absolutely none! In order that any satisfactory results may be expected from the teaching instituted some such criterion must be obtained. It is here again that the Binet-Simon scale may be used to the greatest advantage as a guide. Moreover, although even at this period the psychological tests are of great value, the still greater advantage of their application before the pupil is sent to the special school is obvious. That period of varying length of useless trial would have thus been obviated with the consequent generalized economy of effort and coincident more satisfactory results.

The advantages to the individual to be derived from this method of procedure are then briefly these: The mental grade of the pupil is recognized early, he can be placed in the correspondingly appropriate grade at once, and subsequent intellectual development can be accurately ascertained. The gain to the community by this plan lies in the fact that by it the mentally retarded may be removed early from the general public school and segregated according to the degree of their mental backwardness in a manner which will render the feeble-minded no longer a menace to the community.

In order that any such desired results may be obtained even in the comparatively near future, a change in our present attitude and a revision of our understanding of the problems to be met will be essential. Among the factors for success the following especially merit considerate attention:

The feeble-minded constitute an alarmingly large class which at liberty lives to the detriment of social organization.

In order to reduce their evil effects on the community the feeble-minded should be recognized early and segregated.

The problem is fundamentally one in preventive medicine, and its solution depends primarily on the medical profession working in cooperation with the public in general and with special organizations in particular.

The best opportunity for the recognition of the feeble-minded at an early age is to be found in the public schools.

Insofar as is possible, in general, and invariably in suspected cases, a thorough physical examination supplemented by a standardized testing of mental development should be carried out.

Pupils found by this examination to be mentally backward should be removed from the general classes and disposed of according to the grade of the defect.

Those simply retarded should be immediately given the benefit of the special, ungraded school training.

Those who are feeble-minded should be removed entirely from the public schools and segregated in appropriate institutions.

The public school system should be altered insofar as the institution of such a scheme of examination requires, with possibly the establishment of a psychological clinic, where, under the supervision of a competent director, the work may be carried out to the greatest advantage.

Humboldt Building.

A STUDY OF 575 SCHOOLCHILDREN *

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The following study was suggested by several articles recently published relating to the physical condition of schoolchildren and their school progress. It would seem that in many previous investigations sufficient attention was not given to the many influences affecting the school life of the child, and to the various relationships of such influences.

The details of the present study are given fairly complete and the investigation was not undertaken for the purpose of proving or disproving any theories regarding the school life of the child. The children are those regularly enrolled in one of the schools in St. Louis situated in a fairly populous district of people of moderate means. The school is an eighth grade intermediate school containing children of ages varying from 6 to 14 years approximately. Children attending the kindergarten are not included in the study. Each child was examined or interviewed at least twice, and the following information obtained, namely, age, sex, occupation of parent or guardian, number of children in the family, physical condition, and results obtained on advice. From the teachers, information was obtained as to attendance and school standing. A record was made at the end of the school year of the number of days' attendance out of a possible 200 days.

School standing was scheduled in this manner: The teacher was asked to send to the principal a list of the pupils in her room in the order of their general proficiency or ability to do the regular work of the room. Each list of forty to fifty names was then divided into three groups according to their standing on the list.

Further information was noted regarding nutrition and development, but as these subjects are matters of personal judgment unless determined on the basis of hemoglobin estimation and careful measurements it was thought best not to consider it in the present study.

A careful consideration of the relationship of social conditions to health conditions and school standing demonstrated that it would be impossible to form any definite conclusions or make any accurate tables from the limited material at our disposal. A few words will explain our position on this point. Sixty-eight per cent. of the children examined were from families of three or more children, and accurate estimates of relative school standing or of relative physical condition could not be obtained unless we made comparisons between equal groups of children coming from families of one and of two children only.

A similar difficulty arises also in the study of occupations and incomes of parents or guardians, because 78 per cent. of the children were of families whose income was less than \$20 per week.

In the following study, therefore, the questions of nutrition and development, family income, and size of family have necessarily and intentionally been omitted.

In 111 of the cases full information could not be obtained for the reason that many of the children do not remain in school the entire year. The complete study relates, therefore, only to 464 cases.

Some explanation is necessary to an understanding of the following tables.

A general examination of the heart and lungs of the children convinced us that there were no cases of "open" tuberculosis in the school and that the number of children with cardiac lesions was very small. By the term "normal" we mean, therefore, children in apparently good health, with no impairment of special senses, no throat obstruction, and with apparently sound teeth.

By the term "defective teeth" we mean children presenting one or more carious teeth. Very few cases were discovered that presented any considerable alveolar ulceration or malformations. Naturally a careful examination made by a dental surgeon would have materially increased our number of defective teeth, but the classification as it stands seems to us reasonable and adequate.

Under the heading "throat obstruction" are classified the children having enlarged tonsils, adenoids, nasal abnormalities, or such various combinations of pathologic conditions as decidedly obstruct respiration.

The classification "defective vision" includes errors of refraction and such other abnormalities as impair vision. Inflamed eyelids are not included under this title. There were found to be few cases of serious eyelid trouble that were free from visual defect, and the cases were grouped as normal unless vision was affected.

* Read before the St. Louis Pediatric Society, Nov. 14, 1913.

“Middle ear defects” include chronic inflammatory middle ear disease with impairment of hearing.

By the term “not classified” is meant those cases in which complete general information could not be obtained.

The following table should now be intelligible:

	Not Classified	School Standing			Treatment Obtained		
		I Highest	II	III Lowest	Glasses	Operation	Dental Work
Normal	41	69	62	41	..	..	..
Defective teeth	21	36	44	42	..	..	29
Defective teeth and throat obstruction	9	6	5	6	..	4	3
Defective teeth and Visual defects ...	7	10	11	13	12	..	2
Defective teeth, throat obstruction and visual defects	3	3	1	4	..	1	1
Visual defects	12	12	17	27	27	..	..
Visual defects and throat obstruction	3	1	2	4	5	1	..
Throat obstruction..	11	8	11	16	..	11	..
Middle ear and speech defects ..	4	3	4	6	..	..	..
Totals	111	148	157	159	44	17	35

Total number examined, 575.
Total number with complete information, 464.
Number found to be normal, 213, or 37 per cent.
Number found with defective teeth, 221, or 38 per cent.
Number found with defective vision, 169, or 29 per cent.
Number found with throat obstruction, 93, or 16 per cent.

As will be seen from the foregoing table, the various defects found among the children are grouped in several combinations. In order to obtain a definite method of comparison between physical defects, school attendance, and school standing, it was thought reasonable and suffi-

ciently accurate to arrange the table with reference to the predominant defect or defects, as follows:

- 1. Normal children.
- 2. Children with dental caries the predominant defect.
- 3. Children with throat obstruction predominant.
- 4. Children with visual defects predominant.

Following this plan of classification charts were constructed in percentage with reference to the school standing, and are here presented, together with facility of study.

Until some further information is adduced regarding the attendance relationship, I shall postpone a discussion of these “curves.”

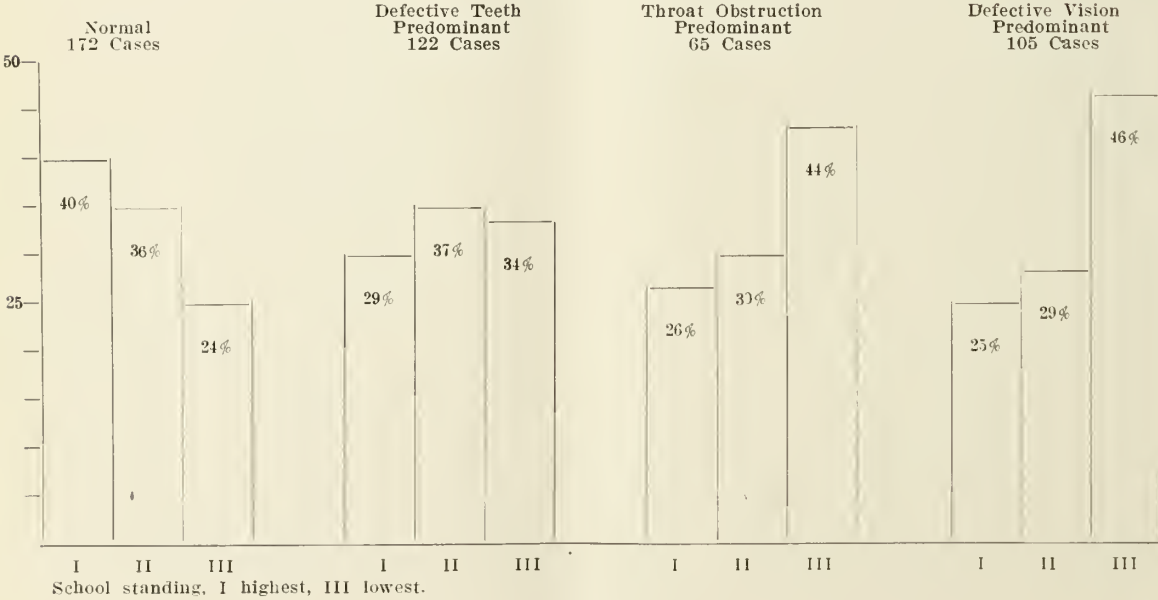
There must necessarily be a close relationship between the school standing of children and their record of attendance; the following table illustrates this:

RELATIONSHIP BETWEEN SCHOOL STANDING AND ATTENDANCE

	200 to 190	190 to 180	180 to 170	170 to 160	160 to 150	150 to 140	140 to 130	130 to 120	120 to 110	110 to 100
Grade I ..	49	37	14	9	6	8	5	1	..	11
Grade II ..	37	41	17	19	10	4	3	2	2	10
Grade III..	22	30	20	18	11	5	10	4	..	5

Children with attendance under 100 days are half-year pupils and cannot be considered in any conclusions that are made from this table.

	Rank Grade I	Rank Grade II	Rank Grade III
Children losing less than 20 days	86	78	52
Children losing more than 20 days	43	57	83



The last relationship to be considered is that between attendance and physical defects. It is impossible to estimate fully and accurately the influence of physical defects on school attendance, for the reason that under the laws of the state the compulsory attendance department of schools very effectively maintains a high percentage of attendance in spite of physical defects that otherwise would keep many children out of school much of the time. Even with the assistance of a very efficient attendance department, we can appreciate the influence of unfavorable physical conditions on attendance by a study of the following table:

POSSIBLE ATTENDANCE 200 DAYS													
	190	180	170	160	150	140	130	120	110	100	Under 100	Days	
	to 200	to 190	to 180	to 170	to 160	to 150	to 140	to 130	to 120	to 110	to 100		
Normal 1	51	36	23	11	8	7	6	4	2	..	13		
Defective teeth only 2	24	26	16	14	6	3	6	..	..	2	14		
Defective vision pre-dominant 3	20	24	10	5	8	3	2	2	..	2	3		
Throat obstruction pre-dominant 4	13	10	5	3	3	2	2	1	..	1	6		
Vision and throat (3 and 4)	3	3	1	4	..	..	1	..	..	..	..
Middle ear and speech defects	3	4	1	1	3	1	1	..	..	..	..

The children who attended less than 100 days were half-year pupils and should not be considered in this table.

The number of children attending less than 130 days is so small that satisfactory conclusions cannot be obtained. They should be grouped in the classification 130 to 120. Considering the attendance in these eight groups and arranging the physical defects under three main heads, the following relationship is found:

	190	180	170	160	150	140	130	120
	to 200	to 190	to 180	to 170	to 160	to 150	to 140	to 130
Normal	51	36	23	11	8	7	6	6
Defective teeth	24	26	16	14	6	3	6	2
Defects of vision, throat obstructions or combined defects	39	41	17	13	14	6	6	6

This comparison shows that the physical condition of the child does materially influence the school attendance despite the legal necessity of attending school unless acutely ill.

A brief statement of conclusion may be made without a complete statistical analysis of the table. Considering only the children who have lost twenty days of schooling, an amount sufficient to affect school work seriously even if not lost in consecutive days, we find that of the normal children 41 per cent. lost twenty days during the school year. Of those presenting

various physical defects, on the other hand, 54 per cent. lost twenty days during the school year. This statement is, of course, open to the criticism of partial analysis, but a more complete study will show the practical relationship, and I think substantiate our interpretation of the table.

An accurate estimate of the effect of the physical condition of children on their school standing and consequently on their school progress, can now be formulated. A separate study of school progress has been undertaken by Mr. W. C. Reavis, the school principal with whom I was associated in the preparation of this article. and to whom my thanks are due for much of the information obtained. School standing and school progress seem to parallel each other with reference to the influences here studied.

The work of the child in school is intimately associated with his attendance at school, but we have noticed in this investigation that the physical condition of the child has considerable effect on his attendance. The last point, therefore, in the investigation, and it would seem a very important point, is the very material effect that the physical condition of the child has on his school work. Reverting to the tables presented in the first part of this paper, I wish to call attention to the "curves" that naturally follow such a charting. The basis of comparison is the normal curve of 40.36, 24 per cent. sloping gradually and uniformly to children ranking III or lowest.

The effect of dental caries is somewhat leveling with an increase of Class II. Throat and visual defects, either alone or combined, result in a decided increase of Class III and the curves are distinctly and uniformly reversed as compared with the normal.

It may not be possible to state authoritatively and conclusively any general conclusions from a study so limited in material, but many studies made along lines here indicated would force one to the opinion that the effect of physical conditions on the school work of children has not been overestimated.

In conclusion, allow me to call attention to the encouraging results obtained by the systematic examination and advice given the parents through regular notification, and by the following up of cases by the school nurse. Several years of such work should result in a material reduction of the physical defects which are so detrimental to school progress, and subsequently to a marked improvement in the health of school-children and in the quality of the work accomplished by them.

Carleton Building.

LUKE, THE GREEK PHYSICIAN

PART VI

THE BRAIN IN RELATION TO MEDICAL SCIENCE
AND PIOUS FAITHGEORGE HOMAN, M.D.
ST. LOUIS

If it be granted at the outset that all observed human activities, in whatever domain or direction they may be exerted, have their seat and source within the skull of man, then a subject of surpassing interest presents itself to every student of nature, this problem being as to the manner in which the brain of mankind was framed, the primitive type from which it was evolved, the structural and functional variations due to the many different factors that have influenced its development since man's forbears first appeared on earth. The building of the brain, the shaping of its contour, the enlargement of its capacity, the refining of its quality, the increase of its powers, the definition of its faculties, the coordination of its functions must ever be questions of absorbing interest to every intelligent person whose thoughts turn toward the beginnings of matter and mind and who seeks to know more of the still unsettled questions of embryology, physiology, psychology and related branches of scientific knowledge.

The study and survey already given to the mentality of Luke the Physician have tended to establish as a fact that his brain at its best represented the choice fruitage of developmental law in nature, expressing itself in favoring circumstances through and by means of exceptional influences that were racial, ancestral, educational and environmental, and the result ultimately was a quality of brain which could draw a line of sound distinction between science and faith, in short, one that sensed the truth that miracle and superstition as phenomena of religion would tend to disappear as cerebral development and mental breadth increased. It represented or reflected the progressive attitude and element of the age in which he lived, that being a time when differentiation between the concepts of priest and physician had not been generally or clearly drawn, the presumption on biological grounds being that cerebral accommodation for such a separation had not yet reached fruition and full development.

Pious faith is a synonym for religion which is defined as being:

"A belief binding the spiritual nature of man to a supernatural being on whom he is conscious that he is dependent; also, the practice that springs out of such relation, including the personal life and experience, the doctrine, the duties and the rites founded on it."

As man can be conscious of nothing except through the medium of his brain so religious consciousness must acknowledge a cerebral seat or refuge as well as those forms that are social, scientific, political, etc., and the location of this seat is of interest and importance in this connection. As already suggested, the study of the brain had little if any place in the thought of writers of the holy books of different religions, for, although this inquiry was begun by medical men in the schools of Hippocrates, yet it has been only within recent centuries that the cleavage between ecclesiasticism and medicine became so marked as to enable the healing profession to establish itself securely on scientific ground and press its researches independent of any restraint from pious sources, so that psychology as now understood is of rather modern birth.

It has been characteristic of all the principal religions which the world has known for their prophets and priests to rely on appeals to emotion and imagination rather than to reason and intelligence, and that this is true is not without significance and calls upon physiology and psychology for adequate explanation; for, if this be possible, it would be a long step toward the wedding of sound physics and sane psychics in an ecclesiastical sense and thus establish religion on its true foundation.

If for example our knowledge of cerebral function and locale has reached a degree of sureness so that within well defined parts of the normal brain it can be shown that certain mental powers have their seat—as reason, will, judgment, memory—then it would be quite rational to hold that other traits or faculties—as religious faith, conscience, morality—are equally well placed and accommodated in the brain. The general habit among all religious propagandists has been to ignore or deny the fact of such natural anatomical connection and psychologic relationship, and to soar in imagination to regions unknown to reason, whose sway, however, in every other respect is conceded to be supreme: so that if, instead of pointing to the sky as the place of hope and justification, they would through mastery of the laws of body and mind, recognize the brain as the sole medium of such impressions, a surer resting place for real piety would be afforded and one that would be in harmony with the operation of mind and matter throughout visible nature.

The ground plan or starting point in the building of the human brain is found by biologists in the very lowest forms of animal life, and a development is traceable in unbroken sequence successively through higher organisms until the end crowns the work in the encephalon of civilized, sane, enlightened man. It is hardly necessary to mention to a medical assemblage the fact that a conspectus in miniature of this

entire process is shown by the normal human fetus during its ten-month sojourn in the womb.

A large number of authorities of unimpeachable standing could be cited in support of the position indicated, but only one will now be quoted:

. . . "In going up the phylogenetic . . . series, we find a gradual process of development headward, brainward, cerebrumward; or, more generally, we might say that in all organic evolution we find an increasing dominance of the higher over the lower, and of the highest over all. For example, in the lowest plane of either series we find first the different systems imperfectly or not at all differentiated. Then, as differentiation of these progress, we find an increased dominance of the highest system—the *nervous system*; then in the nervous system, the increasing dominance of its highest part—the *brain*; then in the brain the increasing dominance of its highest ganglion—the *cerebrum*; and, lastly, in the cerebrum the increasing dominance of its highest substance—the exterior gray matter—as shown by the increasing number and depth of the convolutions. . . . When evolution is transferred from the animal to the human plane, from the physiological to the psychical, from the involuntary and necessary to the voluntary and free, shall not the same law hold good? Yes! all social evolution, all culture, all education, whether of the race or the individual, must follow the same law. All psychical advance is . . . an increasing dominance of the higher over the lower and of the highest over all; of the mind over the body, and in the mind of the higher faculties over the lower; and, finally, the subordination of the whole to the highest moral purpose." (p. 171.) . . . "Every mental state corresponds with a particular brain state, and every mental change with a brain change. We have, therefore, here, two series, physical and psychical, corresponding with each other, term for term. For every change in the one there is a corresponding change in the other, both in kind and amount. Now, is not this the test of the relation of cause and effect? It certainly is. Yes, there must be a causal relation here, even though we are not able to understand the nature of the causal nexus" (p. 337).¹

At what precise stage in his upward course man reached the point when moral or spiritual elements first dawned and declared themselves and which by their presence would argue a notable physical change in the brain to accommodate such faculties, is not as yet fully determined, but this advance most likely was marked by the expression in Genesis which reads: "And man became a living soul," and which in its spirit points toward evolution.

The development in the brain of centers of intellectual, moral, religious and other rational conceptions must have been extremely slow, but that the upbuilding went continuously on cannot be doubted, as evidences drawn from remotest antiquity support this view and show that isolated peoples shared in this spontaneous evolution. Among ancient nations best known to modern life the Greeks seem to have attained the most finished outshinings in mind, heart, soul, science, intellect and work, this through

causes operating through many centuries and yielding symmetrical and superior results in every field of endeavor—art, literature, philosophy, oratory, medicine, law, architecture, poetry, the drama all evidencing the continuing high degree of Greek mental attainment in this type of national intellect, as before mentioned.

It is well known that among aborigines the rôles or functions of priest and physician are joined in one person but with civilized nations divorcement of this relationship took place many centuries ago. That this outward and visible fact was preceded by inward invisible change in brain growth and quality, and by means of which the change was strictly conditioned, admits of no reasonable doubt, the increasing outward expression as time went on being the measure of the definite anatomic, physiologic and psychic cerebral alteration effected. The point or place in the brain where this primitive function had its seat and where final differentiation took place may not be so easy of exact location as are the root centers of the special senses—sight, hearing, smell, touch, taste—for these are primary in their nature, the others becoming defined and featured as human mentality slowly rose in the course of intellectual and moral development. It is fully in accord with other observations in nature that these changes were determined and took place under the laws that govern man's being and growth, were effected by nervous, vascular and nutritional influences in the area concerned, and were structural, stable and inheritable in character, duly passing in descent from generation to generation.

"Physician, heal thyself!" was the counsel given by Luke only in his gospel and which came from earlier Greek philosophy supposedly through the Galilean teacher; and it is of importance in the effort to reach an understanding of the workings of the medical mind in those days especially when considered in connection with the further admonition "Prove all things hold fast to that which is good," for both were taken to heart by the early leaders of the profession, becoming an ingrained part of creed and work, and furnish a clew to their later course and attitude as devoted followers of science in its many branches.

The price demanded by nature for the perfect working of organ or part is normal exercise, as only thus can any organ of special sense, muscle or nerve center do its appointed work and efficiently fulfill its destined function. When in earlier ages one person stood for both priest and physician and the impulses thus developed were motivated from a single center in his brain, the causes that led to ultimate differentiation of those functions are of profound interest to physicians, and it is believed that natural law as observed in daily working affords a sufficient

1. *Evolution its Nature, its Evidences and its Relation to Religious Thought*, Joseph LeConte, Appleton & Co., 1896.

explanation of this momentous change and conveys both lesson and warning to later ages. Again, Luke the Physician will be resorted to for light as afforded by his story of the master, who, departing for a lengthened absence in foreign parts, gave to each of his servants a sum of money (termed pounds or talents) for investment or productive use. On his return an accounting was held by him and the unslothful servant who was found to have increased the loan tenfold was highly commended and rewarded, while another one who laid away the fund in a napkin was as strongly condemned, thus throwing light on the ruling spirit in merely business ethics and transactions.

But it is the law of nature that moral faculty or physical function unused or wrongfully employed tends to wither or decay, and the question is whether the medical profession has been faithful to the trust or talent committed to its keeping through cerebral change of a striking sort! It is true that for many centuries scientific medicine was clogged and confused by superstitions, dogmas, futile traditions and false doctrines, but eventually the hard-fought battle for light, truth, freedom and science was won, and in the accounting of its gains and triumphs in the struggle for the betterment of humanity there is now none to stand before it. History shows that it has intelligently faced, fought and conquered pandemics that yearly claimed their myriads of human victims and before which organized religion in all its great divisions bowed as if to the divine will without questioning or resistance, while scientific medicine, ever seeking new light, drawing knowledge from every source, exercising every power of the mind through reason, observation, experience and research, has won such intellectual and material victories that dark places became as an open book and mankind is being saved and the world made new by its ceaseless labors. When all men's motives to action are cast into the crucible the test by fire will not be shunned by physicians for their most devoted work is directed toward the removal of the causes of all diseases, thus unselfishly striving to bring about as soon as may be a better world for better people when preventable ills will be unknown. What other profession of like antiquity is engaged in equally good work in this direction?

It is quite safe to say as a result of such painstaking diligence, and the fullest exercise of the brain powers bestowed, by keeping closely in touch and sympathy with the best thought of the times and the mental progress of the world, that the value of the medical profession to the human race is to-day more than tenfold what it was a century or less ago, and the promise for the future is even yet more favorable provided that it shall remain true to the moral and scientific trust long ago given into its keeping. for

then it will have fully earned the expressive sanction and reward:

"Well done, thou good servant: because thou hast been faithful in a very little, have thou rule over ten cities."

Not far from the middle of one of the great divisions of the ocean there is a point where movement is almost unknown although deep currents and tides in the sea sweep in all directions around it, carrying fertility to the continents on its border, softening climates, modifying weather conditions, equalizing temperatures and safeguarding human welfare in many ways; but at the point mentioned the ocean gathers together its wreckage and debris, seaweed and derelicts to stagnate and decay, the hindrance to progress offered by these dead masses being serious and positively known to marine navigation. Seafaring men and scientists know this locality as the Sargasso sea, and it may well be conceived that a similar phenomenon exists in the great ocean of human consciousness, a center of stagnant intelligence where is collected much that is an obstacle to useful service and forward motion for mankind, as, ancient superstitions, outworn dogmas, obsolete notions, shipwrecked doctrines, inept traditions and the like; and the mariners of medicine, if they value their scientific birthright and professional estate, must watchfully steer clear of such an entanglement for out of such a snare the profession was delivered only after centuries of continuous and conscientious struggle.

In an earlier place in this series the opinion was ventured that the special distinction of Luke the Physician, as a medical man, lay in the probability that he was a leader in the work of bringing together medical science and pious faith in natural reasonable relationship although only what may be held to be justifiable inferences can be offered in its support; but the concrete comprehensive quality of his Greek nature favors this view and the ultimate separation of sacerdotal ecclesiasticism or dogmatic theology and scientific medicine was a probable outcome of the work of his mind and others of like cast and complexion.

In considering the build and functioning of the brain,

"Probably the most important subject from a clinical and scientific standpoint, . . . is the question of cerebral localization—i. e., that certain known areas of the brain preside over certain definite functions. . . . Although there is still some difference of opinion among investigators as to the absolute limits of certain localizable areas, it is settled beyond dispute that there are fixed areas presiding over motion, language, and sight, and a strong presumption in favor of the localization of the various forms of common sensation, . . . and of the higher intellectual faculties. In the cerebral cortex there are localized areas governing . . . the higher mental faculties . . . lying on each side of the fissure of

Rolando, between the precentral and intraparietal fissures" (pp. 448-9).²

Haeckel discusses a "specific human-mind element or, as it is usually expressed, a 'divine spark'" by which the mind of man is said to be distinguished from that of all other animals, and says,

"it must itself be a thing capable of evolution, and has actually developed progressively in the course of human history (p. 453). . . . Just as the motive force of our flesh is involved in the muscular form-element, so is the thinking force of our spirit involved in the form-element of the brain. Our spiritual forces are as much functions of this part of the body, as every force is a function of a material body. We know of no matter which does not possess force, and, conversely, of no forces that are not connected with matter." (p. 457.)³

Mention was made elsewhere that in early times the brain as the seat of intellect or reason was little thought of in connection with religious faith or theological doctrine, and in support of this view a recent writer⁴ says:

"The actual personality of the individual in life consisted . . . in the visible body, and the invisible intelligence the seat of the last being considered the "heart" or the "belly," which indeed furnished the chief designations for the intelligence." (p. 55.)

In no other particular perhaps has the change in manner of thought and in the elements of knowledge been made more clearly apparent, scientific medicine steadily moving toward the solution of unknown problems concerning human welfare and its basis in or relation to brain growth, doctrinal theology yet standing still, as of old.

"When we come to . . . survey Luke's peculiar material, we find that it presents incident after incident and saying after saying which set forth from varying points of view the broad and tender sympathy of Jesus. . . . We cannot doubt that Luke, who was little interested in the miraculous element . . . was profoundly moved by what he learned of the depth and universality of the Master's sympathy."⁵ (pp. 46, 47.)

The power which ordained cerebral differentiation and mental independence to the healing profession seems at present beyond human ken but undoubtedly the change came about in response to a demand that grew out of the instinctive elemental needs of the race, and which has been confirmed by physiologic exercise and established by psychic use, and whether the seat of such faculty is in gyrus, cortex, sulcus or fornix is of secondary importance, for it is doubtless true that the evolutionary development of the brain is still going on and must so continue until points have been reached and powers

conferred that shall far transcend any limitations now known.

There is much of likelihood in the view just quoted that Luke took little interest in reputed miraculous healings, regarding them, if genuine, from the standpoint of the medical scientist, recognizing their psychologic bearing and natural relationship to physical conditions of the brain, and it is reasonable to hold that his Greek upbringing had much to do with this attitude. The poverty of known fact as to the beginnings of Christianity and concerning the first generation of its advocates and adherents should forbid dogmatic assertion from any source whatever, for the error of its supporters would seem to lie in this direction. As pious faith has a proper seat in the cerebrum as legitimate as any other phase of understanding—even though it would often appear to be napped in form and rudimentary in expression—it is conceivable that vision, enthusiasm, rapture, ecstasy, etc., attesting such form of emotion, are a part of Nature's plan for brain development and mental upbuilding, provided always that circulatory and other factors are ever within physiologic limit, as, otherwise, that way danger lies in delusion, mania, insanity, so that right reason and sane judgment must govern in the case of religious emotion as in all other mental manifestations. In this respect Luke seems to have held up the mirror to the psychology of his times as a physician, rather than as a religious doctrinaire, ruling his own spirit as a minister of the word, which is much more than can be truthfully said of most of the apostles.

In discussing a certain form of mental or moral instability Huxley⁶ observes:

"It is hard . . . to say so, but it is exactly the honesty and sincerity of the man which are his undoing as a witness to the miraculous. He himself makes it quite obvious that when his profound piety comes on the stage, his good sense and even his perception of right and wrong make their exit." (p. 170.) And he further says of scientific fact: "It is this rational ground of belief which writers . . . no less than Paul . . . so little dream of offering that they would regard the demand for it as a kind of blasphemy." (p. 191.)

As the tempter has a snare for all it is well worth considering whether the choice made by the early church of a theology rather than a religion was not a fall into temptation the sad consequences of which have been measured in large part by the sweat, the tears, the blood of near half a hundred human generations—a creed or creeds which fostered the passions that for many centuries bred suspicion, contention, hatred and mutual slaughter among the races and nations known to Christianity. All of this in disregard of the spirit of the gospel declared by Luke and which, if fulfilled, would bring

2. Gordinier, H. C.: *The Gross and Minute Anatomy of the Central Nervous System*, 1899.

3. Appleton's Scientific Library: *The Evolution of Man*, ii, 1896.

4. Breasted, James H.: *Development of Religion and Thought in Ancient Egypt*, 1912.

5. Jesus, Gilbert, George H.: *McMillan Co.*, 1912.

6. Huxley: *Science and Christian Tradition*, D. Appleton & Co., 1897.

on earth peace and health and weal to men of good will, good work and good faith—a religion worthy alike of its prophet, its apostle, and of a sane mankind as well.

It can scarcely be doubted that from out of what is termed Christianity something much better than is now known will appear as the brain of the race proceeds in development of power and differentiation of function, that the foibles of pious imagination will not much longer prevail over the facts of practical intelligence as demonstrated by medical science—when the divine sanity and exalted humanity which mark the message of the Great Physician and the Greek Physician shall have replaced in the consciousness of mankind the ancient dogmas, discredited doctrines and irrational theology coming from barbarous ages which have weighed with such crushing effect on the fortunes and souls of men.

THE HONEY-BEE AND ITS PRODUCTS *

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In this paper on "The Honey-Bee and Its Products," in the lantern-slide talk, and in explaining the hive, bee, and honey exhibit, only the most salient points can be touched on. To go into details would prolong the evening's entertainment to an unreasonable hour.

Life History of the Bee.—The wild honey-bee of the woods is the brown-black bee, generally called the German bee, which, according to apicultural literature, was introduced into America in the sixteenth century. This claim, though, seems disproved by recent discoveries. The Bulletin of the International Bureau of American Republics writes as follows: "The finding of honey among the Aztec ruins establishes the fact beyond all question that bees were known in Mexico long before the days of Cortez."

The home of the wild bee is generally a hollow tree. To get more easily to the insect's sweet product, man has, to a certain extent, domesticated the bee and built a house for it, called a hive. Its inhabitants are termed a colony of bees. A strong colony numbers from forty to sixty thousand bees. And this colony is composed of workers, drones, and a queen.

The workers are females, but their ovaries are not properly developed. They attend to all the work of the colony. Feeding the larvae, the queen and the drones, keeping the hive clean, defending their home against enemies, collecting nectar, transforming it into honey, and storing it in the cells built so artistically from wax

secreted by their own bodies—these are but few of the duties and wonderful doings of the busy little worker bee. Her life period is from six weeks to six months. During the main honey flow, when the flora is in its height, she lives only about six weeks. She hurries from the hive to the flowers and back, all day long, wearing herself out, and finally dies, very likely of starvation, on her last trip.

The drones of the colony are the males, which are larger and more bulky than the workers. Their importance and only need in the economy of the hive is their duty as male, which act ends in death. There are hundreds of drones in a strong colony at that time of the year when males are needed. But at the end of the honey crop and in the fall of the year these fellows are harassed and hustled out of the hive by the worker bees, where they perish by actual starvation, as the workers will not permit them to re-enter the hive. The drone cannot defend himself, as he is not the possessor of that powerful fighting weapon, the sting, which his good sister is always ready to use, even at the cost of her own life, for stinging generally results in her death.

The queen bee, larger than either worker or drone, is the mother of all the bees, and there is but one to a colony. German apiarists name her the mother bee, a more correct appellation. The queen is the only completely sexually endowed female bee in the colony. When eight to ten days old, she leaves the hive and meets the drone on the wing in copulation which fertilizes her for life. During the busy breeding season she lays from two to three thousand eggs per day which hatch in twenty-one days into worker bees. She lays comparatively few drone eggs; these hatch in twenty-five days. The queen herself develops in sixteen days from a regular worker egg which was fed by a special food, called royal jelly. This food, theoretically, is the cause of the ovarian development of the mother bee. She, like the worker bee, possesses that important organ, the sting, which she uses only in fighting a rival queen. Two queens seldom live happily in the same hive. Usually there is a duel to the finish. The queen's average life period is about three years.

Many experienced honey producers requeen their colonies every two years, because older queens lay less eggs, which result in weak colonies.

Races of the Honey-Bee.—Of the numerous races of bees found among the apiarists of this country, only the most important ones will be mentioned. The Italian type is by far the most frequent. It is yellow in color, somewhat larger than the black bee, already mentioned, and is noted for its gentleness; not always ready for a fight like her wild black sister. It works earlier and later in the day, which is an important

* Read before the St. Louis Medical Society, Feb. 28, 1914.

advantage; and it withstands bee disease better than any of the other races.

The Carniolan bee was introduced into the United States from Carniola, Austria. It resembles the black bee, with a little blue-gray added to the black color, but is larger; in fact, it is the largest bee found in this country.

The Caucasian bee, brought from Russia, looks very much like the common black bee. Both the Carniolan and Caucasian very likely are offsprings of the wild black bee.

The Cyprian bee, imported from the island of Cyprus, is a tartar for viciousness, but a honey producer of extraordinary note; a United States bulletin gives the almost incredulous record of a Cyprian colony producing one thousand pounds of honey in one year.

Swarming.—In the Spring of the year when the fields are aglow with flowers, the bees of a colony increase in number to such an extent that part of them must look for a new home. They swarm out of the hive, accompanied by the old queen, leaving their home to the younger bees and a queen just hatching. The old bees usually select the limb of a tree or a shrub nearby to cluster on. The bee culturist always tries to save these swarms by hiving them, thus adding an additional colony to his apiary. When the swarm is hanging on a shrub or limb of a small tree there is no trouble in shaking the bees in front of an empty hive, letting them run in at the entrance; but when the cluster is high up on a tall tree there frequently is considerable work in getting to it. Usually, though, some device can be arranged to hive the swarm.

If the swarm, hanging on the limb of a tree, is not hived, scouts of this swarm will hunt a hollow tree and guide the bees to their new home.

Bees an Aid in Pollinating Blossoms.—The bees are a great aid in the fertilization of blossoms. Flitting from flower to flower, the pollen grains of the anthers, adhering to the bee's wings and body, are transferred to the stigma, thus pollinating the blossom. Without pollination there cannot be fertilization, and consequently no fruit could result. "Under natural conditions," writes A. C. Miller, a recognized authority, "blossoms and insects are fairly well balanced; but when man masses the flowers in countless millions, as in large orchards, he must also mass insects; and honey-bees are the only insects which he can control."

In the far West, a pear orchard of thirty-five acres failed to produce fruit. The owner, visiting a friend in the southern part of his state, noted that the same variety of pear trees were heavily laden with fruit. His friend showed him a dozen stands of bees, explaining their pollinating advantage, and advised him to place bees in his orchard. The next year the previously fruitless pear orchard gave a plentiful return.

This pollination of plants by the bee, expert horticulturists say, is of greater value to mankind than the entire honey crop. Its importance can be estimated by considering last year's honey yield of the United States, which amounted to over 200,000,000 pounds.

The bees gather quite a quantity of pollen and store it away mainly in the comb-cells of the brood chamber. This pollen is their nitrogenous food and is of especial importance; in fact, is an absolute necessity for brood rearing.

Honey.—In the past ages of antiquity honey was recognized as the world's most delicious sweet. It was held in this high esteem until comparatively recent times. But nowadays it is seldom found dividing honors with other choice sweet foods. Why? Because until a few years ago the adulteration of honey was almost a universal practice in this country. On June 30, 1906, though, a pure food law was enacted which put a complete check on the nefarious practice of filling a bottle with glucose and a small piece of comb honey, sweetening it with saccharin and labeling it "pure honey." But to convince the public of the present day that they can again buy the honey-bee's genuine pure product is not an easy matter. The average person will remember that he has been imposed on.

What is honey? Bulletin No. 110 of the United States Department of Agriculture, entitled "Chemical Analysis and Composition of American Honeys," defines honey as "the nectar and saccharin exudation of plants, gathered, modified and stored in the comb by honey-bees." Almost all honey is formed from nectar. The bee, though, will collect any other sweet, especially when she fails to find nectar-secreting blossoms. At such times she will work on the sap of the maple tree, on bruised or injured fruit (over-ripe berries frequently crack open and exude sweet juices), on the sweet fluid found on the leaves of oak, linden, tulip and other trees. This latter sweet, called honey dew, is not "heaven's saccharin spray," as was formerly supposed, but is the excretion of aphides (plant lice). It is of very dark color, offensive in odor and nauseous to the taste, and therefore unfit for table use. The national pure-food law does not recognize it as honey and directs that it be labeled "honey-dew honey." To detect it when admixed with floral honey the government's test is the polariscope. Floral honey is laevorotatory, while honey dew and glucose adulterations turn the plane of polarized light to the right. To conform with the United States statute, honey must not contain over 8 per cent. sucrose, nor over 25 per cent. water, and its ash contents must be limited to 0.25 per cent. Gleanings in Bee Culture relates "a most important case of honey adulteration which was recently tried and won by the government before the United States court in Philadelphia. A large syrup and honey

company of New York sold and shipped to a Philadelphia dealer a quantity of honey labeled "Choice Pure Strained Honey." The government officers seized the shipment as misbranded and adulterated. This New York firm evidently were so sure their adulteration of honey with invert sugar could not be detected that they employed the highest priced and best corporation lawyers, doing a large business in the United States supreme court, along with the best expert chemists they could find. The trial, which was an arrayal of legal and chemical talent against legal and chemical talent, lasted ten days, and was concluded, as stated above, in favor of the government. A significant part of Judge Holland's charge to the jury reads as follows: "You will notice that an article is adulterated if any substance has been substituted, whole or in part. There is no question as to whether the adulteration be deleterious or injurious to the health. The substitution may be beneficial, but the law is to guarantee each citizen that, as a consumer, he shall know, when he desires to purchase a certain article, what he gets and what he pays for. That is the object of the law. It is to protect the consumers against the adulteration or misbranding of their goods and their drugs so that they may be able to rely on what an article is said to contain and may rely so that they will not be misled by the label." My object in relating this case of honey adulteration is to bring out forcibly the vast importance of the United States Food and Drugs Act of June 30, 1906.

The flavor, aroma and color of honey is very variable; they originate from the flowers from which the nectar was gathered by the industrious honey-bee. Honey from the flowers of some of the cactus family is not fit for table use, and dogwood blossom honey has a very bitter taste. The apiarist leaves such honey with the bees to feed on during winter and for brood rearing.

The quality of honey also depends on the flowers from which the nectar was collected and on its proper ripening process by the bees. Fresh, green honey usually sours and becomes watery. The "Wild Flower Honey," on the St. Louis market, is left with the bees for thorough seasoning and mellowing till the late fall. By this method of ripening honey it is true less honey is produced, but it is of superfine quality; and to market only the best of the honey-bee's product should be the aim and desire of the apiarist. The Wild Flower Honey is so called because it is gathered from the blossoms of trees, shrubs, vines and weeds growing in the "sunken lands" of southeastern Missouri and northeastern Arkansas. The apiaries are located on islands in the St. Francis River, surrounded by thousands of acres of uncultivated land, where the busy little honey-bee toils incessantly, garnering the world's most delicious sweet.

Comb and Extracted Honey.—Honey is offered the consumer in two forms—in the comb and as extracted honey. The little sections of comb everybody knows. Extracted honey is the liquid taken from the comb with a machine, called honey extractor; its action depends on centrifugal force. This form of honey has entirely superseded the old time "strained" honey which was not always the most sanitary article of food. Strained honey usually was the result of mashing combs of honey, live and dead bees and other things. Then this conglomerated mass was strained through cheese-cloth.

Extracted honey frequently granulates; this "sugaring" is a sign of purity and not of adulteration, as is supposed by some. Several years ago the writer received a can of mesquit honey from Phoenix, Ariz., which was completely solidified. After cutting away the top and bottom of the can with a can-opener, one side was split open; then the tin was peeled off the solid sixty-pound block of honey.

The wax of comb-honey is indigestible and frequently acts as an irritant to the gastrointestinal mucosa. Some persons, on this account, cannot eat comb-honey but can use the extracted form without complaint. Another cause of this digestive disturbance very probably is the following: The little sections of comb-honey are taken away from the bees immediately after they are sealed over, otherwise the cappings would become travel-stained which would prevent their sale at top market price. Now this hurry in removing the comb-honey from the bees shortens the time for the thorough ripening of the product, and you have as a result the stated gastro-intestinal derangement.

Food Value of Honey.—Honey ranks among the very highest nutritive values of our food products. Comparing it with some of the most common foods, its actual importance is easily demonstrated. *Honey contains over 80 per cent. food substance and less than 20 per cent. water.* Wheat-bread, served at every meal, furnishes 60 per cent. nourishment and contains over 30 per cent. water. Potatoes consist of 75 per cent. water and produce 24 per cent. vital force. In city milk, additional water is always suspected, but the cow's genuine product contains water to the extent of 86 per cent.

Dr. C. C. Miller, author of "Fifty Years among the Bees," writes: "The value of honey is attested by its introduction into the German Army. Each soldier carries his tube of honey in his knapsack, as experience proves that the use of honey increases strength and endurance on the march."

We all have read in the Good Old Book that the Israelites lived and prospered on milk, honey and grasshoppers. We of the present day, how-

ever, prefer to omit the grasshoppers from our menu.

Economically considered and in line with the Government's noble fight on the high cost of living, honey should be classed as the prime sweet food to be placed on the dining table at every meal. It should not be considered a luxury, but a staple article of food, like butter. Why? Equaling butter in nutritive value, it is from ten to twenty cents per pound cheaper, reaches farther, and will keep indefinitely, as it does not deteriorate. In last September's issue of the *National Geographic Magazine*, referring to the recent excavations in Egypt by the American explorer, J. M. Davis, we read: "Most startling of all was the discovery of a jar of honey, still liquid and still preserving its characteristic scent after three thousand three hundred years." Just think of it, my friends, honey buried in the bowels of Mother Earth for over three thousand years and still retaining its characteristic aroma! Certainly, this proves the statement that honey will keep indefinitely.

Most foods contain a certain amount of indigestible matter which is discharged from the system as waste. In honey only a fractional part of 1 per cent. is actual waste. Honey, therefore, is one of the most concentrated foods in existence.

In the treatment of gastro-intestinal disease the use of sweets is generally interdicted, for the reason that the digestive apparatus is deficient in transforming cane sugar into glucose. Honey, though, is the one sweet which can be taken with positive advantage, because the sucrose of the floral nectar has been converted into the invert sugars, levulose and dextrose, which need practically no aid from the digestive system to bring about absorption. Heartburn and sour stomach, following so frequently the ingestion of sugar, does not occur when honey is substituted.

In the early ten to fifteen years of life, during the child's growth and development, there is an extraordinary craving for sweetmeats which frequently overtaxes the stomach, resulting in gastric and intestinal derangement. Replace the sugars with honey and the complaint will not recur.

In diabetes, levulose or saccharin is usually ordered to satisfy the longing of these patients for sweets. My apiaries are surrounded by thousands of tupelo trees the blossoms of which are productive of more levulose honey than is gathered from any other known source. Therefore, I consider tupelo honey especially adapted for diabetics.

Honey has a mild laxative and diuretic effect—two very important properties.

In weak and poorly nourished children, and adults too, cod-liver oil is a great builder of strength, but with many persons the fishy, oily taste produces nausea and stomachic discom-

fort. Honey and butter, warmed and beaten into a cream, form an excellent substitute, containing the needed fat and the highly priced carbohydrate.

In these remarks on the high nutritive value of honey, both in health and disease, no claim is intended that honey should be considered as a balanced food ration. That would be irrational. Its great value is based on its practically predigested carbohydrate contents.

Chemical analysis shows that many other ingredients are found in honey, for example: albumin, iron, an acid, ethereal oils, salts, etc. These are all of considerable importance, but cannot be dwelt upon at this time.

In the prescription writing of former days, honey was a frequent ingredient; it very likely was discontinued in the days of honey adulteration. May it not again be ordered with advantage in the various cough syrups, benzoate of soda mixtures, and other prescriptions?

Beeswax.—The other product of the honey-bee is wax. This is a secretion of glands located in the abdominal wall of the worker bee. From it the honey-comb is built, the cells of which form the receptacles for storing honey or pollen or the developing brood. Comb-building is at its height during a heavy honey flow, and if a hive is opened at this time great numbers of bees are seen hanging in festoons on the combs; these bees are actively engaged in secreting wax. Beeswax is of considerable commercial importance. Candle manufacturers use it in the making of the finest candles, such as are seen in churches. Dentists use it in taking plate impressions, and druggists in compounding ointments and plasters. Honey producers purchase annually many hundred tons in the shape of comb foundation. Foundation is beeswax rolled out by machinery to the thinness of writing paper; then it is given to the bees in sheets to draw out into combs. The use of foundation insures straight comb building and an increased honey harvest.

Literature.—Many times has the writer been asked to name a good bee book. The following rank as the best:

Langstroth on "The Honey Bee" is the recognized classic authority. Farmers' Bulletin 447, entitled "Bees," by Dr. E. F. Phillips, of the U. S. Department of Agriculture, is a pamphlet of 48 pages giving an excellent, brief synopsis of beekeeping. The most complete, up-to-date work is "A B C and X Y Z of Bee Culture," edited by E. R. Root, and written by the most competent specialists in the various departments of apiculture. "Chemical Analysis and Composition of American Honeys," by C. A. Browne, including "A Microscopical Study of Honey Pollen," by W. J. Young, is a volume published as Bulletin No. 110, by the U. S. Department of Agriculture. It is the only special book on honey in the English language. This most thorough

work is based on the analysis of over one hundred samples of honeys which formed the interesting honey exhibit at the St. Louis Exposition in 1904, made by the National Beekeepers' Association. The leading journals are "Gleanings in Bee Culture" and the "American Bee Journal."

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PYELITIS COMPLICATING PREGNANCY

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While a number of articles have appeared recently in the special literature on this subject, pyelitis and pyelonephrosis as complications of pregnancy have not, on the whole, received the attention they deserve. My experience has convinced me that this condition is often overlooked, either through lack of careful examination or through ignorance of the existence of this not uncommon complication.

Let us consider broadly the subject of urinary infection during pregnancy. It seems almost impossible to realize that, even at this day, many physicians neglect to make routine urinalyses in their pregnancy cases, but it is a fact nevertheless. As long as the pregnant woman does not complain of urinary symptoms little or no attention is paid to the urine; and even when symptoms are found they are often explained away as "being natural." The fact that during the first and last weeks of gestation the woman usually has some urinary symptoms often leads both patient and physician astray.

According to De Lee,¹ bacteriuria is found in about 15 per cent. of all pregnant women, usually accompanied by some pus cells. Certain changes occur regularly in the bladder of the pregnant woman, as noted by Mirabeau.² McDonald³ and others, that is, congestion, edema, etc. From this it will be seen that we have in normal pregnancy all the factors for the production of a cystitis, the presence of which is not an uncommon occurrence. Whether there is such a thing as ascending infection from the bladder does not seem to have been definitely settled as yet, although its possibility seems to have been demonstrated in animals by Lewin and Goldsmith,⁴ Baumgarten⁵ and others. This, with the patency of the ureteral orifices mentioned by McDonald,⁶ seems to make ascending infection quite possible. Gonococcus and colon bacillus infections are

thought to reach the kidney pelvis by this route; the tubercle bacillus is probably always blood-borne, while the streptococcus and staphylococcus may pursue either course. The colon bacillus, the bacterium most commonly found, may also migrate from the large bowel.

However, we know that pyelitis is usually caused either by partial or recurrent total obstruction of the ureter, to which, of course, infection must be added; for example, the various causes of hydronephrosis, such as kinking due to movable kidney, stricture or pressure at the point where the ureter crosses the pelvic brim, etc.; in other words, incomplete drainage. No matter how the infectious agent reaches the kidney it is rather generally accepted that pyelitis means insufficient drainage. Whether stone in the kidney pelvis is the result or the cause of pyelitis still seems to be a question, but it is probable that stone is never formed in a healthy kidney or kidney pelvis. It goes without saying that after being present it will certainly keep up the condition. If obstruction is the main cause of pyelitis we can readily understand how partial obstruction can exist before pregnancy and be made worse by the congestion of the ureters as well as by pressure from the pregnant uterus on the ureter where it crosses the brim of the pelvis; to which we must add, as pointed out by McDonald,⁶ the already vulnerable condition of the kidney itself. It is seen from the above that during pregnancy we may have an initial pyelitis caused by the changes accompanying pregnancy, or we may have a pre-existing pyelitis which did not cause symptoms until the factor of pregnancy was added.

The diagnosis of pyelitis may be easy or difficult; usually it is easy, if we have an accompanying pyelonephrosis, but even then it is often mistaken for gall-stone, appendicitis, etc. A typical case presents this picture: the patient has complained of urinary disturbances for some days or weeks, when suddenly she is seized with acute pain in one or the other hypochondria, more often the right, the pain being located deeply, toward the back. This attack of pain is accompanied or preceded by a chill and high fever and very often vomiting. The urine examined at this time is usually rather scanty but otherwise may be nearly normal, since the urine is from the normal kidney, the affected ureter being occluded. On examination we find acute tenderness and often a tumor mass in the affected side, the tenderness being usually high under the ribs and rather deeply seated. After some hours or days the obstruction is usually overcome and there is a rather profuse flow of pus-laden urine and an entire cessation of all subjective symptoms, the patient considering herself well. This occurrence may be repeated at irregular intervals until the patient is exhausted. If an attack persists for a long enough period of time a

1. DeLee: Principles and Practice of Obstetrics. W. B. Saunders Co., 1913.

2. Mirabeau: Muenchen. med. Wchnschr., Feb. 12, 1907.

3. McDonald: Diagnosis of Early Pregnancy. Am. Jour. Obst., 1900, lvii, 3.

4. Lewin and Goldsmith: Virchows Arch., 1893, cxxx, 10.

5. Baumgarten: Berl. klin. Wchnschr., Oct. 23, 1905.

6. McDonald: Am. Medicine (New Series), 1910, v, No. 12.

decided uremia will be added to the other symptoms; in other words, we have the symptoms of urinary obstruction, urinary septicemia, and possibly of uremia. Unfortunately we do not always have such a characteristic picture. In the less acute cases, or in those cases where a total obstruction does not ensue, we have a slight septic fever, pain in the bladder, dysuria and usually an aching pain in the kidney region. The kidney affected is always tender. The urine contains pus, bacteria and usually casts. But even where the pains are acute and there is high fever, the condition is sometimes confused with threatened or incomplete abortion. Since, especially in the cities, abortion is so commonly practiced, the first thing a physician thinks of when he is called to see a pregnant woman with fever and pain in the abdomen is that an unsuccessful attempt at abortion has been made, and he has to deal with a case of incomplete abortion, plus sepsis. If, in addition, the woman actually has labor pains, this mistake is even more readily made. As sepsis or toxemia may bring on abortion or premature labor, so pyelitis may be the cause of abortion, and we may have the two conditions co-existing. We may find a pregnant woman with high fever, bloody flow, partially dilated cervix, and labor pains; the first thing we think of is that the woman has had an abortion attempted, with the not too infrequent result—partial expulsion of the fetus, and infection. We may be so taken with this idea that we do not think of making any further examination, or taking a catheterized specimen of urine—a voided specimen being entirely out of the question—but proceed at once to treat a supposed uterine infection. We empty the uterus, and if the fever does not subside, perhaps do a curettage, intra-uterine douching, etc., wondering why we do not get any results from our treatment. I have seen at least one case in which this was done.

Even in uncomplicated cases of pyelitis the diagnosis is not always easy. If there be recurrent ureteral obstruction the fever is usually very irregular, and where we see the patient once or twice daily, as in private practice, we may happen to find her without fever on some days, or if we find fever we take a single specimen of urine and find nothing to account for the severity of the symptoms. This may convince a careless attendant of the absence of urinary infection and he diagnoses "malaria" or "typhoid." If we find a rise in temperature, and at the same time the characteristic urinary findings, and if we bear in mind the possibility of a pyelitis, we shall seldom fail to make the diagnosis.

Now a few words as to treatment. If we find the patient in a state of profuse toxemia, the first thing to do is to induce perspiration, either by the hot pack or by hypodermic injection of pilocarpin hydrochlorid $1/5$ to $2/5$ grain,

or by both combined. At the same time, providing vomiting is not too profuse, we must begin with urinary antiseptics, and since we have hexamethylenamin we need not consider any others. The mistake that is usually made in administering this drug is to give it in insufficient quantities. I usually begin with doses of 15 grains given every three hours in a prescription as follows:

℞ Hexamethylenamin	3 iii-3iv
Kali acetatis	3 iv
Fl. Ext. hyoscyami.....	3 i
Fl. Ext. tritici.....q. s. ad.	3 iii
M. ft Sol.	

Sig: Half tablespoonful to be given with plenty of water every three hours.

The potassium acetate promotes the flow of urine and thus helps to relieve the toxemia. The hyoscyamus tends somewhat to relieve the pain and tenesmus, and the tritium acts at once as a diuretic and demulcent. Hinman⁷ has shown that hexamethylenamin is active only in acid urine, and fortunately in pyelitis we always have an acid urine. While it may seem that the addition of potassium acetate counteracts the effects of the hexamethylenamin it does not seem to be sufficient to neutralize the acidity of the urine; at least this prescription has never failed me in practice. In case we have to deal with a cystitis and the urine is alkaline it may be necessary to alternate this drug with potassium acid phosphate as recommended by Hinman. It goes without saying that we do not continue the administration of large doses of hexamethylenamin at such frequent intervals. If we watch the urine we will find that the pus, which is at first very light and settles slowly, will, sooner or later, become more dense and settle more rapidly. By the macroscopic appearance of the urine alone we can usually tell when the patient is getting enough hexamethylenamin, the formaldehyd formed in the urine coagulating the pus, leaving the supernatant urine nearly or entirely clear; at the same time the fever is gone, as a rule, and the patient feels much better. If we continue these large doses we will soon get to the point where the patient complains of burning on urination and the kidneys may again become sensitive; if we still continue, we are very apt to get hematuria. Therefore, as soon as the urine presents the characteristics already alluded to, we either diminish the amount of hexamethylenamin in the above prescription, or increase the interval between doses, giving just enough of the drug to keep down bacterial activity and not enough to irritate the urinary passages. It is my firm conviction that by combining hexamethylenamin with a urinary demulcent, such as tritium, in large enough doses, many of the disagreeable symptoms sometimes caused by the former drug will be obviated.

7. Hinman: Jour. A. M. A., 1913, lxi, No. 18, 1601.

After the acute symptoms have subsided, hexamethylenamin in doses of about 10 grains twice or three times a day, either alone or in combination with other drugs as occasion may indicate, should be continued for some time. The principal point is to give just enough of the drug to keep down infection, but not enough to do any harm. Should the drug not be well borne after a while we may resort to some of the older urinary antiseptics, such as boric acid or some one of the salicylic acid preparations, as salol, aspirin or, best of all, diplosal. Later on we may give some balsamic, as oil of sandalwood, balsam of copaiba, etc. In many cases the symptoms may thus be held in abeyance until the termination of pregnancy, or even a cure effected. It is not necessary to mention such other adjuvants to the treatment as rest in bed, plentiful administration of water, and keeping the patient on a bland diet (milk, etc.), as every practitioner is familiar with this phase of the subject.

If the pyelitis is due to pregnancy, *per se*, it will subside spontaneously on its termination.

This brings up the treatment of pyelitis by the induction of abortion. In bad cases, as well as in cases which have been neglected for some time, the induction of abortion is the only hope of saving the patient's life. One will of course bear in mind that under such conditions abortion should be performed under the most scrupulously aseptic conditions and the urine should be kept as nearly as possible aseptic by the administration of urinary antiseptics, supplemented perhaps by bladder irrigation.

If the pyelitis does not subside within a short time after the termination of pregnancy we have presumptive evidence that there is some other cause for the pyelitis and the patient should be turned over to someone skilled in the diagnosis of urinary conditions. I have seen two women gradually go to pieces from tuberculosis of the kidney who had had typical attacks of pyelonephrosis during pregnancy, the urine being laden with pus and colon bacilli apparently in pure culture, in whom the symptoms were so completely relieved after delivery that they refused any further treatment at that time, although the urine still showed small amounts of pus and bacteria. This emphasizes the fact that while we may think a case of pyelitis complicating pregnancy is caused by the latter condition it may simply have been aggravated by it; under no conditions should such a patient be discharged from observation until she is entirely free from all urinary symptoms, both subjective and objective.

I may be criticized for not urging a cystoscopic examination, with attempts at a more accurate diagnosis, immediately on the appearance of symptoms. I fully realize that this is the ideal thing to do, but like many ideals it does not seem to be practical, at any rate in

private practice. If the patient is in a well appointed hospital it may be perfectly legitimate to attempt to arrive at an exact diagnosis by means of the use of the cystoscope at once, although I am not entirely convinced that the use of the cystoscope and ureteral catheterization in an acutely inflamed urinary tract is entirely without danger of aggravating an existing condition. However that may be, there are many obstacles in the way of using these refinements of diagnostic technic in general practice, especially when one is at some distance from a medical center.

CONCLUSIONS

1. That pyelitis is not an infrequent complication of pregnancy.
2. That its diagnosis is often overlooked, at any rate at its beginning.
3. That in most cases it can be held in abeyance by means of urinary aseptics, properly administered.
4. That many cases of so-called pyelitis of pregnancy are simply old cases of urinary infection which have become active on the addition of the added factor of pregnancy, and should be considered so until proven otherwise.

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A POINT IN THE TECHNIC OF THE REMOVAL OF GOITER

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In the operation of thyroidectomy it is often difficult to ligate the superior and inferior thyroid vessels neatly, on account of their deep position under the muscles and fascia. Especially is this true of those soft small glands often encountered with exophthalmic symptoms. And it is just these cases in which the handling of the gland necessary to bring the superior and inferior poles into view is especially contraindicated, for fear of overwhelming the patient with thyroid secretion.

To meet this dilemma we have used with great satisfaction in thirty cases a double four-pronged forceps (Fig. 1).

After the superficial muscles and fascia have been cut and the capsule of the thyroid opened, the forceps are plunged into the center of the lobe selected for enucleation and traction made by the assistant. This traction does not produce anywhere near as much manipulation of the glands as the ordinary handling does. The superior pole is thus brought into easy operative reach often without the division of the sternomastoid muscle. An aneurysm needle is then forced under the superior thyroid vessels through the substance of the gland and ligated. (Fig. 2.) The inferior vessels are treated in the same

fashion, after dissecting the gland from above and freeing it from the capsule posteriorly.

I have found this process very satisfactory. In many exophthalmic goiters, in which we have modified Crile's plan to the extent of keeping the

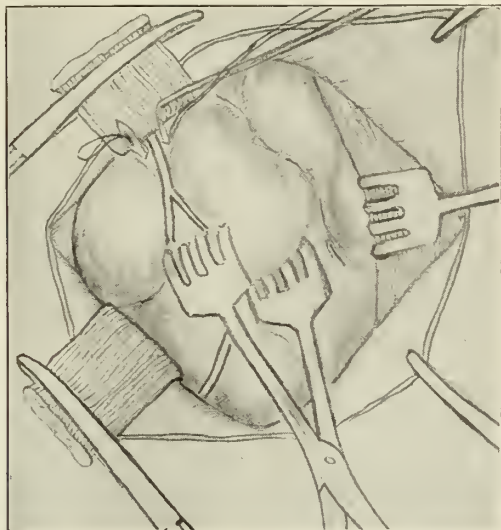


Fig. 1.—Forceps used in enucleating the thyroid.

patient in ignorance of the time set for the operation until the moment when she is sent to the operating-room, I have felt that this method saved them much thyro-intoxication. It has been a common experience to find an exoph-



Fig. 2.—The forceps used to make traction on the gland for the purpose of ligating the superior thyroid artery.

thalmic goiter patient sitting up alert and cheerful, with dry skin and unaccelerated pulse on the evening of the day of operation.

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OCULAR MANIFESTATIONS OF SINUS DISEASE*

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In looking up the literature on this subject I find most of it was written in the past eight years. The x-ray and the clinical pathologist have aided us materially in the positive diagnosis of sinus disease.

Orbital complications associated with sinuses are classified by Skillern¹ as follows:

1. Disturbances in circulation: (a) hyperemia; (b) thrombosis of the vena centralis retina; (c) thrombosis of the cavernous sinus.

2. Intoxication. This form affects the optic and is most associated as sphenoidal empyema in which there always exists more or less obstruction.

3. Purulent inflammation. The continual apposition of purulent secretions results in maceration of the epithelium and gradually pervades the mucous and underlying bone; coming in contact with the bone, it infiltrates through the canalicular and Haversian canals (possibly with the aid of the blood and lymph vessels), reaching the periosteum of the opposite side and spreading from the same.

Kuht divides the orbital manifestations as follows:

1. Affections of the conjunctiva and cornea.

2. Affections of the uveal tract, affections of the retina and optical nerve.

3. Functional: (a) muscular asthenopia; (b) loss of accommodation.

4. Mechanical: (a) disturbances of bulbar-mobility; (b) irritation of the optic nerve through pressure caused by inflammation.

The first intimation that the orbital contents have been infected through sinus disease is a slight persistent edema of the upper lid which is unaccompanied by hyperemia or pain. If the sinus affection is recognized and properly treated at this stage, resolution takes place at once. On the other hand, should the infection continue,³ an orbital abscess will result. In chronic cases abscess formation is very gradual. In frontal sinus empyema one would expect to find the abscess in the anterior portion of the orbit with posterior ethmoid or sphenoid suppuration, then the abscess would be posterior. The direction of the dislocation of the bulb will differentiate these conditions. Those caused by pressure (mechanical) closed empyema and mucocele will frequently dislocate the bulb without causing inflammatory symptoms. The dislocation is downward and outward, if from the frontal sinuses; forward, downward and outward if from the ethmoid. When the pressure attacks the optic nerve disturbances in sight occur, that is, the field of vision contracted—amblyopia, optic nerve atrophy, change in the cornea.

Uveal tract, chorioid, retina-iris and lens (cataract)² have been reported by ophthalmologists. Retrobulbar neuritis which may result in atrophy and loss of vision and also occurs from accessory sinus disease. One of the most early signs of posterior sinus disease is an enlargement of the blind spot.

3. Those caused by toxins, muscular anasthenopia and loss of accommodation. The optic nerve seems particularly susceptible to the action

* Read in the Eye, Ear, Nose and Throat Section of Jackson County Medical Society, March 12, 1914.

1. Accessory Sinuses of the Nose, by Ross Hall Skillern.

3. Baumgardin: Journal of Laryngology, Rhinology and Otolaryngology, London, vol. 29, No. 1.

2. Journal of Eye, Ear, Nose and Throat Disease, 1905.

of toxins and limitations of visual field is the first symptoms of sinusitis. Dull pain and eye-ache is a frequent symptom. When an orbital complication is about to take place an individual will suffer in general health. This change is usually ushered in with a fever, the height of the fever being in direct ratio with the violence of the complications.

Baumgardin³ reports seventeen cases of orbital manifestations of sinus diseases. Of the seventeen cases five were classified as retrobulbar neuritis; two as amblyopia with normal fundus; three with papillitis acuta; two as papillitis chronica. In three cases neuritis acuta was found and in two decolorato papilla. Central scotoma was present in five cases, paracentral in one, and central color scotoma in eight. The color scotoma disappeared in all cases immediately after the first operation, and was always the first sign of improvement.

In reference to nasal condition found in these cases, and the treatment required, I have recognized three groups: Sinusitis, enlarged turbinates, deviated septum.

Dislocation of the globe without orbital inflammation may be occasioned by a chronic distention of the sinus walls. Variations in the degree of exophthalmos are rather characteristic and are to be explained, as pointed out by Posey, as a consequence of variations in the patulence of the sinus orifice. Tumors of the sphenoid do not ordinarily involve the optic nerve but may exceptionally cause progressive atrophy from pressure.

Affections of the extra-ocular muscles. Complete paralysis of all the ocular muscles may, in rare instances, be traced to an optical cellulitis of the orbit, or sphenoidal or ethmoidal origin.

Affections of the lacrimal apparatus. An empyema of one of the sinuses may empty into the lacrimal sac. More frequently the pus discharges into the tissues surrounding the sac, there giving rise to the so-called prelacrimal abscess.

Affections of the lids. A moderate edema of the lids, most marked in the morning and on bending forward, is frequently associated with sinus disease. It is often unilateral, corresponding to the other side of the affected sinus, and is apt to be confined to the nasal half of the upper lid. Inflammation of the lid margin associated with chronic conjunctivitis is often found in cases of sinusitis.

Affections of the cornea. Herpetic-like blisters of the cornea in consequence of the implication of the fifth nerve as it passes along the outer wall of the sphenoidal sinus have been recorded by Posey and Ellinger.

Affections of the chorioid. Risley and Fish have described cases which seem to indicate that certain chorioidal inflammations may originate from diseased sinuses.

MAXILLARY SINUS

Orbital abscess is, of course, the most dangerous of these, for it can easily lead on to intracranial infection. This may occur either through the optic foramen or through the orbital roof. Orbital complications through the maxillary antrum run precisely the same course as those from the other sinuses. If exophthalmos occurs, the direction of the protrusion, at least in the beginning, may be upward and forward, in contradistinction to that from the anterior ethmoidal and frontal sinuses. Meningeal complications without previous orbital infections rarely occur owing to the fact that no anatomical connection exists between the maxillary sinus and the cranial cavity.

FRONTAL SINUSES

When orbital complications associated with frontal sinusitis occur, the symptoms usually set in with violent manifestations, due to diffuse inflammation of one or more walls. As a result of the rapidity of this process perforation of the walls occurs and the infectious material is quickly transported to the neighboring tissues, especially to those of the eye. All sorts of orbital and ocular conditions have from time to time been reported following acute frontal empyema.

ETHMOID LABYRINTH

Acute rupture into the eye is characterized by sudden outward dislocation of the bulb, swelling and infiltration of eyelids, intense pain in the eye which radiates over that side of the forehead, high fever and general prostration. Fluctuation may be felt above the inner canthus if the purulent mass be forward.

SPHENOID SINUS

Enlargement of the blind spot is almost pathognomonic for some disturbance in the posterior ethmoid or sphenoid sinuses. Exophthalmos, when present, is due to (a) edema of the orbital tissue from some obstruction to the returning venous circulation; (b) paralysis of external ocular muscles from toxemia; or (c) retrobulbar swelling due to extension of purulent process.

I believe a thorough examination of the nose and accessory sinuses essential in all eye cases. In the past few years I have permanently relieved many patients with various forms of orbital pain—orbital neuralgia, unilateral and general—by giving free ventilation and drainage to the nose and accessory sinuses—in submucous resections of a deflected septum and the removal of a hypertrophied turbinate. It is surprising to observe how small an amount of intranasal surgery, when done by a competent operator, is necessary to relieve and cure these cases.

1201 Rialto Building.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

MAY, 1914

EDITORIALS

THE JOPLIN SESSION

The Association will begin its annual session at Joplin on Tuesday, May 12, at 9 a. m. and continue its session during Wednesday and Thursday. The program committee has arranged the work of the House of Delegates and the scientific sessions so that there will be no conflict between these two bodies. On Tuesday the House of Delegates will begin its work and continue in session all day, holding its meetings in the Carnegie Library. The delegates are urged to be present early and remain until all work has been completed as there are some very important matters to be considered. Bring your credentials with you and deposit them with the Secretary. If the delegate cannot attend the meeting he should indorse his credentials over to the alternate by filling in the blank space provided for this purpose on the back of the credentials.

The scientific session will begin on Tuesday, the 12th, at 9 a. m. These sessions will meet in the Joplin theater. The members will find this an ideal hall for the reading and discussion of papers. The committee has arranged the papers so that essayists will have the full time allotted for reading papers and ample time for discussion on each paper. All those who have been placed on the program are requested to be on hand at the time appointed for the reading of their papers. The program committee has quite a variety of topics with no large preponderance of either surgical or medical subjects, the effort being to have articles that will interest the largest number of members. All scientific work will be done in general session, the sections having been suspended last year.

Members of Jasper County Medical Society will give a reception and dance on Wednesday evening at the Connor Hotel, assisted by the ladies of Joplin and other towns in the county. A ladies reception committee has been appointed to entertain the wives and families of the members.

THE MEDICAL SECRETARIES' SOCIETY

The annual meeting of the Medical Secretaries' Society will be held in the large parlor in the

Connor Hotel on Wednesday, April 13, at 3 o'clock. At 6 p. m. on the same day the annual dinner will be held in the same room.

DELINQUENTS

A number of members have not yet paid their annual dues for this year and a few have overlooked this important obligation for 1913. Here is work for the county society secretary as well as for the state secretary and the councilors, for all these officers are anxious to have every member maintain himself in good standing at all times. But the member himself is the one who loses by neglecting to pay his dues. The right to defense in malpractice suits is denied all who have failed to pay their annual dues; they cannot register at the annual meeting, nor can they take any part in the proceedings. Subscription to THE JOURNAL is also endangered and, in fact, all the rights and privileges of membership are suspended without action of the organization until the member restores himself to good standing by paying his county society dues.

We earnestly urge all members who have not yet attended to this duty to do so at once. The amount is small but the benefits accruing from continuous membership in the organized profession are so necessary and important to the progressive and reputable practitioner that the wide-awake physician does not permit himself to delay in the discharge of this obligation to the organization that is doing so much for the advancement of the science of medicine and trying to do still more for the protection of the practitioner.

Send your dues to the county secretary at once.

HOTELS AT JOPLIN

Connor Hotel (headquarters), European plan, \$1 to \$2 without bath; \$1.50 to \$4 with bath; \$1 extra for each additional person in the room.

Yates Hotel, American plan, \$1.50 to \$2.50 per day.

A large number of rooms in private homes and boarding houses have been reserved for members who do not care to stop at hotels. Dr. J. B. Taulbee of Joplin is chairman of the Committee on Arrangements, to whom communications concerning reservations can be sent, but it is advisable to make hotel reservations direct with the hotels.

PAMPHLETS ON PUBLIC HEALTH TOPICS

The Council on Health and Public Instruction of the American Medical Association has completed quite a number of pamphlets on subjects pertaining to public health work conducted by

county societies. The distribution of these pamphlets will add very materially in extending the usefulness of public lectures under the auspices of the county medical societies. There are ten pamphlets on Conservation of Vision and many on other phases of preventive medicine, adaptable for distribution among the laity.

The Council is preparing to issue pamphlets on other topics which will be ready for distribution very soon. Officers and members of the county societies who desire to obtain copies of these pamphlets should write to the secretary of the Council on Health and Public Instruction, 535 N. Dearborn St., Chicago.

QUACK DOCTORS INDICTED

The war on medical quacks in St. Louis is still being vigorously prosecuted by the *New St. Louis Star*. This newspaper recently exposed the disreputable and criminal practices of the advertising medical quacks and all the St. Louis newspapers stopped publishing their advertisements after the arrest of a number of the quacks. The owner of the *St. Louis Times* also controls the *Westliche Post*, a paper printed in the German language. The quack doctor advertisements were eliminated from the *Times* but recently the *Westliche Post* carried the advertisement of Dr. H. C. Lloyd, one of the most notorious offenders in this field, and now under indictment by the Federal grand jury for using the mails to defraud. The respectable German citizens who subscribed for the *Westliche Post* immediately entered a vigorous protest and we are informed that the editor has thrown out all the quack doctor advertisements.

In March the Federal grand jury indicted twelve of these offenders on the charge of using the mails in schemes to defraud. They are: H. C. Lloyd, Paul W. Fayn, Ira A. Miller, Nathan A. Hughes, David Daviesson, Chas. C. Addams, A. J. Miller, Thos. F. Nichols, Geo. Ireland, Wm. Pierce, Joseph Moorhead.

POSTGRADUATE COURSE IN CLINICAL PATHOLOGY AND BACTERIOLOGY

The University of Missouri is offering a lecture and demonstration course in clinical pathology to graduate physicians of the state for the four weeks, from April 28 to May 26.

The course will be in charge of Professors Doley and Mitchell of the Department of Pathology and Bacteriology.

Opportunity will be afforded to practitioners to become acquainted with the latest diagnostic and therapeutic methods in bacteriology and with the development of pathology in its relation to clinical medicine. Only phases of the subject

having a definitely practical bearing will be considered. The underlying principles will be discussed in lectures, but it will be the particular aim of the course to illustrate these and to show the technic by demonstration and experiment.

The schedule will be so arranged that those who are unable to attend the entire course may come for a shorter time and get certain phases of the work.

The registration fee will be five dollars. For those taking the extra laboratory work an additional fee of five dollars will be charged.

"NO, NO!"

Recently the postmaster in one of our thriving cities notified us that Dr. W. D. had refused his copy of *THE JOURNAL* of the Missouri State Medical Association. Knowing Dr. D. had always shown deep interest in the Association and curious to learn whether this information was erroneous as we thought must be the case, or if correct why the doctor had developed such a sudden dislike for the official organ of the Association, we asked him if the postmaster's instructions were in accordance with his orders. The appended letter is published because it expresses a sentiment toward the State Journal that we hope is shared by all the members:

"Dear Doctor:—I was very much surprised on receipt of your letter bearing the information from our postoffice that I had refused to accept *The Association Journal*. No; no, doctor, that is a mistake; they have things crossed, that is all. I did refuse a periodical that spelled 'thru,' 'tho' and 'sulfur,' and I don't stand for 'no new spelin an ritin,' so I did what I always do, put it in the stove and stopped it; but *The State Journal*? No, sir. Thank you for your kind wishes.

Yours sincerely,
W. D."

THE KANSAS CITY ELECTION

At the recent election in Kansas City the present chief executive officials were retained in office. It is to be hoped that these officials will give proper attention to the city health agencies so that the public health may be adequately safeguarded.

The recent upheaval in the management and staff of the Kansas City General Hospital was a regrettable occurrence from every standpoint, and particularly deplored by the reputable medical men of the city. It is not likely that there will be a repetition of such an occurrence, but in the effort to economize, efficiency in the health board and the hospital department should not be sacrificed for the saving of a few dollars. Such economy is false economy, which had a practical demonstration in the recent epidemic of contagious diseases.

The result of the election of members of the school board is particularly satisfactory. One of the first duties of the health and school officials is to work out some plan to reestablish medical school inspection on lines so developed as to be more efficient than ever before.

THE "UNITED DOCTORS" SKIP OUT

Mercer County doctors gave the advertising fakers known as the "United Doctors" a little pugilistic battle and won out in the first round. The "United Doctors" did not even get their stakes driven. The method of attack was simplicity itself. But for the benefit of other county societies who may wish to give these fakers a "run for their money" we will mention the details.

The state secretary recently received a letter from one of the physicians in Princeton saying the "United Doctors" and another "noted specialist" would be in Princeton on certain dates and inclosed the advertisements from the newspapers. These advertisements are of the usual flamboyant type, beseeching the people to come to them for "free examination, consultation and advice, making no charge except for the actual cost of medicine." They claimed to be licensed by the state of Missouri and "all they asked in return for these valuable services is for the persons treated to state the results to their friends."

The secretary advised that the first and most important step was to ascertain whether the county prosecuting attorney would fulfill his duty and assist the physicians in compelling the "United Doctors" to comply with the law. Fortunately for Mercer county citizens, they have in Judge R. W. Steckman a prosecuting attorney who is not afraid to interview a crook before the people are robbed. When the "United Doctors" arrived they found the county society doctors and the prosecuting attorney ready for them. We quote from the report of Dr. J. M. Perry of Princeton:

"When the 'United Doctors' appeared we had things ready. Prosecuting Attorney Steckman called him over the 'phone, told him who he was and asked him if he was practicing medicine according to the laws of Missouri. The Noted Doctor admitted he had not registered in the county and the prosecuting attorney impressed him that he was posted as to their methods and history, and after considerable lecturing from our prosecutor the Noted Doctor said he would leave town on the first train to Kansas City, which was at 2:15 o'clock in the afternoon. He had one patient and failed to land him for any cost."

Another "Noted Specialist," a Dr. Potterf, due to commence his operations the next day on any victims overlooked by the "United Doctors," made no effort whatever to obtain patients.

As we are going to press several doctors in Dexter, Stoddard county, have appealed to us for

assistance in attacking the "United Doctors" who are advertised to appear there on April 23. We sincerely hope they will have the effective cooperation of the prosecuting attorney of Stoddard county.

It would be well for the physicians in counties where these fakers attempt to operate to enlist the cooperation of the editors of the newspapers and endeavor to enlighten them on the fraudulent and fake practices of this class of advertising doctors. Perhaps then the editors might refuse to give space to the advertisers; which would, of course, in itself, prevent their appearance as no fake doctor can exist without newspaper advertising.

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NEWS NOTES

THE Southwest Missouri Medical Society held its annual session at Springfield, April 30 to May 1.

DR. F. J. LUTZ of St. Louis, addressed a public meeting at Marshall, April 23, on "The Prevention of Cancer."

DR. A. R. McCOMAS of Sturgeon, councilor of the ninth district, suffered the loss of his entire office equipment recently by a fire that destroyed the building.

ST. LOUIS, Kansas City and other towns in the state have begun clean-up campaigns. Wherever there is a boy scout organization these young citizens have been impressed into the service.

THE new addition to the St. Luke's Hospital at St. Louis, contains seventy-five rooms and almost doubles the capacity of the hospital. It consists of a four-story structure with sun parlors.

DR. A. J. CRISLER of Memphis, Tenn., was a guest of the St. Louis Medical Society on April 18, and delivered an address on "The Prevention of Peritonitis in Belated Cases of Intra-Abdominal Infections with Especial Reference to Iodin."

THE American Association for the Prevention of Cancer will hold a public meeting in St. Louis on May 1, in conjunction with the St. Louis Medical Society. Dr. William L. Rodman of Philadelphia, representing the A. M. A., will speak.

DR. C. C. CLARK of Hastain, was arrested and taken to Warsaw in April, on indictments found by the grand jury and being unable to give bond was placed in jail. The grand jury found five indictments against him, three of which were for practicing medicine without a license and two were criminal charges.

At a public meeting of the Gaseonade-Maries-Osage County Medical Society at Owensville, April 9, Dr. W. S. Allee of Olean, state senator, spoke on Medical Legislation; Dr. O. H. Brown of St. Louis, discussed Causes and Prevention of Some of the More Common Diseases, and Dr. Carroll Smith of St. Louis, spoke on the Cancer Question.

THE municipal assembly at St. Louis has passed the "Pure Ad" bill, making fake ads illegal. The bill had the indorsement of the St. Louis Medical Society, the Advertising League of St. Louis and other civic bodies. The bill was opposed by optometrists, the publisher of a medical journal and some retail merchants. The bill fixes a penalty of \$100 to \$500 for violation. It applies to all forms of advertising.

At the meeting of the St. Louis Medical Society on April 25, medical legislation was the principal topic of discussion. Hon. John T. Barker, attorney-general, gave a most interesting and instructive address on "Medical Legislation from the Viewpoint of the Lawyer." State Senator Dr. W. S. Allee of Olean, addressed the members on "Medical Legislation from the Viewpoint of the Physician."

On Saturday, June 6, the society will entertain Dr. E. P. Lyon, formerly dean of the medical department of St. Louis University, now dean of the medical department of Wisconsin University, who will address the society on "Medical Education." At the same meeting Dr. W. H. Whelpley of St. Louis, will give a historical sketch of the "Mound Builders."

THE Missouri Congress of Mothers held a three-day Child Welfare meeting at Springfield, April 15, 16 and 17. About two hundred people attended the meeting. Among the addresses given were: "Moral Education of the Child in Home and School," Dr. John W. Withers, president of Harris Teachers' College, St. Louis. "The Wider Use of School Plants an Urgent Need; Efforts to Secure Legislation to Meet This Need," Miss Jennie Hildenbrandt, St. Louis. "The Health Problem," Miss Estelle Hinton, Springfield State Normal. "The Necessity and Province of a State Child Welfare Department," Dr. George B. Mangold, director of St. Louis School of Social Economy. "The Need of Co-operation Between Home and School," President W. T. Carrington, Springfield State Normal. "Parental Responsibility in Sex Educa-

tion," Dr. Luella Z. Rummell. "The Montessori System of Teaching Explained and Demonstrated," by Miss Irma Heller, St. Louis. "Report of Research Work on the Fly as a Carrier of Disease," Dr. E. W. Saunders, St. Louis, chairman of Child Hygiene. "The Relation of the Medical Profession to the Home," Dr. G. H. Hoxie, Kansas City.

DR. E. A. DULIN who was elected mayor Tuesday, received his commission this morning and took the oath of office and is now mayor of the city of Nevada.

Dr. Dulin needs no introduction to the people of Nevada, among whom he has lived for many years. He is one of Nevada's very best citizens, a cultured gentleman who ranks high in the esteem of the people of the city and in the professional and business circles of the city. He has been an active loyal democrat all of his life and the honor now paid him is more than fully merited from the standpoint of a citizen as well as a prominent member of the democratic party. He will prove to be a splendid mayor and will treat all the people with the same consideration at all times.

Dr. Dulin appreciates the honor conferred on him and he in return will give Nevada a clean and business-like administration. He is under no obligations to any individual or corporation and will devote his best efforts to the welfare of Nevada and her people.—Nevada (Mo.) Mail.

[Dr. Dulin has been a member of the county and state medical societies for many years and is a Fellow of the American Medical Association.]

CORRESPONDENCE

SAUNDERS' THEORY OF POLIOMYELITIS

ST. LOUIS, March 20, 1914.

To the Editor:—The series of interesting events associated with Saunders' theory of poliomyelitis have taken the form of a climax culminating in his latest article, which appeared in your March number, and your editorial which accepts Saunders' claim to "revolutionary" work in this field.

Last summer following Saunders' address before the St. Louis Medical Society, a special committee was appointed by this society to investigate Saunders' claims. At the invitation of this committee I performed numerous experiments with flies and fly larvae from various sources. The results of my experiments were embodied in a paper entitled "Poisonous Flies and Fly Larvae." This paper was read before the St. Louis Medical Society on Nov. 8, 1913, and it was published in the Weekly Bulletin of

the Society in the issue of Dec. 11, 1913. I have observed some of Saunders' experiments, and I have had access to and read the protocols of his experiments performed before the middle of last summer.

There are many points suggested by Saunders' latest article which I might discuss critically. I shall first call your attention to Figs. 13, 14 and 15, where the reader finds nothing to elucidate the subject of the causation and prevention of infantile paralysis.

I shall disregard further minor points on which a criticism of Saunders' work may be based, and shall attempt to confine myself to the important question of Saunders' claim of a "revolutionary discovery."

My position on this question is as follows: Saunders, in his experiments may have been dealing with the toxin and the virus of acute poliomyelitis, but his evidence in favor of this conclusion is *nil*. He has originated no new theories; they are old theories modified and restated as facts without proof. He has made no contribution to our knowledge of poliomyelitis. He has with enthusiasm popularized conclusions which are without foundation.

What evidence does Dr. Saunders present to substantiate his charge against *Lucilia Caesar*? He offers no proof that this fly is concerned with the transmission of poliomyelitis; further, he does not even show that this fly produces toxic larvae. This latter point, after the identification of the fly, would not be difficult of demonstration and such information may be contained in the unpublished "voluminous protocols."

Saunders assumes that the virus of poliomyelitis produces a toxic albumose. He has not the slightest evidence as a foundation for such an assumption. He does not know that the virus produces any true toxin. Why then is he so specific in designating the nature of the assumed toxin, especially since no known toxin has been proven to be an albumose!

Allow me to discuss briefly Saunders' animal experiments. The experiments with monkeys, Nos. 8, A-5, 7, 15, the two leghorns, the Gordon Setter, are absolutely without scientific value. Identical results may be obtained with poisons. To assume or to state as fact that these experiments have anything to do with poliomyelitis is an absurdity.

The pathological report on Monkey No. 5 does not suggest poliomyelitis nor did the pathologist who made the examination offer an interpretation of his observations. The monkeys injected with the cord of this animal did not present the symptoms of the typical disease. The clinical and pathological observations on these animals are incomplete. The acceptance of presence of paralysis should be done with reserve, for I have reason to believe that mere weakness was interpreted as paralysis in one instance which I observed.

However, the presence of paralysis alone without other evidence is of little importance in establishing a cause for the same, because numerous agents such as poisons, microorganisms, trauma, etc., may produce these effects. Saunders did unquestionably produce paralysis in some of his animals.

I shall next venture my opinion on "the most interesting experiment of the whole series." The animal used in this experiment may have had tonsillitis, appendicitis, or one or more of a host of acute infections. If there is one important fact in support of the conclusion that this animal had poliomyelitis it was not included in the report.

A more detailed consideration of Saunders' experiments is unnecessary, but I desire to present another view of the subject. Suppose that Saunders had produced, by administering fly larvae, a disease clinically and pathologically identical to human poliomyelitis. He would still have a long road to travel before he could prove that he was dealing with the human virus.

Bearing on the point of a disease similar to human poliomyelitis the work of Roemer on a disease observed among guinea-pigs is illuminating.

What can be expected from the experiments which have been undertaken by Dr. Charles A. Klenk? Suppose that he obtains the most favorable results that it is possible to obtain. Suppose that he excludes the presence of ordinary organisms. Suppose that he determines the presence of a filterable virus which will produce typical poliomyelitis in an experimental animal. He would then be near the desired goal set by Saunders, but he would not yet have arrived. Some difficult, time-consuming and expensive serological experiments could be performed to determine the identity of the organism.

GEORGE IVES, M.D.

[NOTE.—The absence of descriptive words under the figures in Saunders' article was an oversight not detected before issuing the JOURNAL.—ED.]

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MISCELLANY

WARNING TO USERS OF TURPENTINE
FOR MEDICINAL OR VETERINARY PURPOSES

USERS OF THIS SUBSTANCE CAUTIONED TO MAKE
CERTAIN THAT IT IS NOT ADULTERATED

Washington, D. C.

As the result of an investigation by the U. S. Department of Agriculture, it has been found that the adulteration of turpentine with mineral

oils is so widespread that druggists and manufacturers of pharmaceutical products and grocers' sundries used for medicinal and veterinary purposes should exercise special caution in purchasing turpentine. Those who use turpentine for this purpose, unless they are careful, run the risk of obtaining an adulterated article and unnecessarily laying themselves open to prosecution under the Food and Drugs Act.

It has been found, moreover, that the turpentine sold to the country stores especially, as usually put out by dealers and manufacturers of grocers' sundries, is often short in volume by as much as 5 or 10 per cent. Dealers, therefore, should also protect themselves through a guarantee from the wholesaler that the bottle contains the full declared volume.

The Department has found that turpentine may be adulterated in the South where it is made and that the further it gets from the South the more extensively and heavily it is adulterated.

In all cases, druggists, manufacturers and wholesale grocers should satisfy themselves that the turpentine is free from adulteration and is true to marked volume.

RACE BETTERMENT

Four hundred men and women of prominence, comprising the first representative group of scientific experts ever gathered in America for that purpose, met at Battle Creek, January 8-12, to assemble evidence of race deterioration and to consider methods of checking the downward trend of mankind. The meeting was known as the First National Conference on Race Betterment. Through the cooperation of the press, the objects and aims of the conference have been very widely disseminated and a resultant influence for better race ideals is anticipated.

The conference had its inception in the efforts of three men, particularly interested in race betterment—Prof. Irving Fisher of Yale University, Dr. J. H. Kellogg of the Battle Creek Sanitarium, and Rev. Newell Dwight Hillis, pastor of Plymouth Church, Brooklyn, N. Y. At the invitation of a central committee chosen largely by these men, fifty men and women of national prominence in the fields of science and education consented to share in the program. Their addresses, together with open discussion of many of the points considered, constituted a very widespread study of all phases of evident race degeneracy and the advocacy of many ideas of reform. Some of the suggested methods of improvement are frequent medical examination of the well, outdoor life, temperance in diet, open-air schools and playgrounds, the encouragement of rural life, the segregation or sterilization of defectives, the encouragement of eugenic mar-

riages by requiring medical certificates before granting license, and the establishing of a eugenics registry for the development of a race of human thoroughbreds.

Among those having a share in the program were: Rev. Newell Dwight Hillis, Jacob Riis, Judge Ben B. Lindsey, Booker T. Washington, Dr. Victor C. Vaughan, Dr. S. Adolphus Knopf, Dr. C. B. Davenport, Dr. J. N. Hurty, the Very Reverend Walter Taylor Sumner and many others of equal prominence.

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SOCIETY PROCEEDINGS

FIFTY-SEVENTH ANNUAL SESSION OF THE MISSOURI STATE MEDICAL ASSOCIATION

Joplin, May 12-14, 1914

PROVISIONAL SCIENTIFIC PROGRAM

GENERAL SESSION

Tuesday, May 12, 9 a. m., Joplin Theater.—Congenital Syphilis, Edwin Henry Schorer, M.D., Kansas City; Report of a Case of Renal Calculi, Greene D. McCall, M. D., Fulton; Treatment of Fistula in Ano, E. H. Thrailkill, M.D., Kansas City; Intermittent Hydronephrosis, C. W. Russell, M.D., Springfield; Placenta Previa, Fred T. Van Eman, M.D., Kansas City; The Early Recognition of the Clinical Significance of Gastric Disturbance, A. Jackson McNeese, M.D., Clinton; Cervical Ribs, Caryl Potter, M.D., St. Joseph; Psychoses Associated with Tabes, F. M. Barnes, M.D., St. Louis.

GENERAL SESSION

Tuesday, May 12, 2 p. m., Joplin Theater.—The Treatment of Deformities Following Infantile Paralysis, R. M. Schauffler, M.D., Kansas City; Diabetes, L. C. Ross, M.D., Springfield; Treatment of Diabetes, R. H. McBaine, M.D., St. Louis; A Case of Pruritis, with Deductions, W. S. Gregory, M.D., St. Joseph; Diagnostic Procedures in Urology, with x-ray pictures, Clarence Capell, M.D., Kansas City; Asthma, Orville H. Brown, M.D., St. Louis; Fracture and Treatment of the Patella, T. C. Boulware, M. D., Butler; The Giant Magnet in General Practice, W. H. Luedde, M.D., St. Louis.

GENERAL SESSION

Tuesday, May 12, 8 p. m., Joplin Theater.—Public meeting: Address of the President, E. H. Miller, M.D., Liberty; Oration on Medicine, T. F. Lockwood, M.D., Butler; Oration on Surgery, T. E. Potter, M.D., St. Joseph.

GENERAL SESSION

Wednesday, May 13, 9 a. m., Joplin Theater.—Symposium on Heart Disease: Use of the Electro-Cardiograph in the Study of Cardiac Conditions, G. Canby Robinson, M.D., St. Louis; Cardiac Arrhythmia, P. T. Bohan, M.D., Kansas City; The Kidneys in Heart Disease, Leo C. Huelsmann, M.D., St. Louis; Respiratory Rhythm in Heart Failure, George H. Hoxie, M.D., Kansas City; Treatment in Heart Disease, Charles H. Neilson, M.D., St. Louis; Functional Affections of the Heart, Franklin E. Murphy, M.D., Kansas City.

GENERAL SESSION

Wednesday, May 13, 1:30 p. m., Joplin Theater.—Status Lymphaticus and Status Hypoplasticus and Their Possible Relationship to Internal Secretions, Wm. W. Duke, M.D., Kansas City; Cancer of the Cecum at the Site of Appendiceal Lesions, Paul Y. Tupper, M.D., St. Louis; Local Anesthesia in Major Surgery, W. A. Shelton, M.D., Kansas City; Upper Abdominal Explorations Under Local Anesthesia, Elmer D. Twyman, M.D., Independence; The Treatment of Migraine, Given Campbell, M.D., St. Louis; The Value of the Von Pirquet Test in the Diagnosis and Prognosis of Pulmonary Tuberculosis in Adults, Walter Fischel, M.D., St. Louis; Surgery of the Heart, Walter C. G. Kirchner, M.D., St. Louis; The Duffield Method of Resuscitation of the New-Born, T. Guy Hetherlin, M.D., Louisiana; A Young Human Embryo, with lantern slide illustrations, Franklin P. Johnson, Columbia (by invitation).

GENERAL SESSION

Wednesday, May 13, 8 p. m., Joplin Theater.—Public meeting: Moving pictures; alumni dinners, 6 to 9 p. m.; reception and dance, Connor Hotel, 9 to 12.

GENERAL SESSION

Thursday, May 14, 10 a. m., Joplin Theater.—The Application of Recent Experimental Work in the Treatment of Intestinal Obstruction, Fred T. Murphy, M.D., St. Louis; Roentgenoscopy in the Right Lower Quadrant of the Abdomen, with lantern slide illustrations, Edward H. Skinner, M.D., Kansas City; Sprains, H. C. Shuttee, M.D., West Plains; Unnecessary Poisonings, Ralph H. Thompson, M.D., St. Louis; What Knowledge Shall Be Imparted to the Laity Concerning Cancer, Frank J. Lutz, M.D., St. Louis; The Medical Quack, R. Emmet Kane, M.D., St. Louis; Auto-Intoxication and Its Relation to Intestinal Indigestion, D. F. Manning, M.D., Marshall; A Few Observations in Regard to Kidney Surgery, Henry J. Scherck, M.D., St. Louis.

GENERAL SESSION

Thursday, May 14, 1:30 p. m., Joplin Theater.—Some Factors in Surgery of the Stomach and Duodenum, J. G. Sheldon, M.D., Kansas City; Cancer and Precancerous Lesions of the Skin, with lantern slide illustrations, Rudolph Buhman, M.D., St. Louis; The Perversions of Consciousness in Mental Diseases, S. A. Johnson, M.D., Springfield; The Treatment of Neuralgia, G. Wilse Robinson, M.D., Kansas City; Drainage in General Peritonitis, W. E. Leighton, M.D., St. Louis; Some Pathological Phases of Development, Bernice B. Barr, M.D., Clinton; Treatment of Neurasthenia, Wm. R. Patterson, M.D., Warrensburg.

SIXTH ANNUAL MEETING MISSOURI SOCIETY OF MEDICAL SECRETARIES

Joplin, Tuesday, May 12, 1914

CONNOR HOTEL, 3 P. M.

PROGRAM

Address
Dr. E. H. Miller, Pres. Missouri State Med. Assn.
Recommendations from the Council.....
.....F. J. Lutz, M.D., Chairman of the Council
Paper.....Dr. A. B. Stone, M.D., Lamar
Paper.....M. A. Smith, M.D., Gallatin
Paper.....T. J. Downing, M.D., New London

PaperWm. Nifong, M.D., Fredericktown
General discussion of above papers.

Subject selected for general discussion: "How many eligible physicians are there in your county not affiliated with your county society? And why are there any?"

Discussion of this subject opened by.....
.....Dr. A. N. Bobbitt, Joplin

BANQUET, CONNOR HOTEL, 6 P. M.

The County Society Secretary.....
...E. J. Goodwin, M.D., Sec. Mo. State Med. Assn.

Some Needed Medical Legislation.....
Frank H. Matthews, M.D., President Missouri
Society of Medical Secretaries.

Our First Meeting and Organization.....
.....A. W. McAlester, Jr., M.D., Kansas City

WASHINGTON UNIVERSITY MEDICAL SOCIETY

The thirteenth meeting of the Washington University Medical Society was held on Monday evening, April 13, 1914, at 8 o'clock, at the Washington University Hospital.

14. DEMONSTRATION OF A CASE OF SYM- METRICAL GANGRENE OF THE FEET IN A CHILD.—By DR. HANS LISSER.

The case is presented because the condition is an uncommon one and also because confusing complications early in the course of the disease obscured the diagnosis. The patient is a colored girl, 7 years old. On Feb. 5, 1914, she complained of a vaginal discharge. Gonococci were demonstrated in smears taken from the vaginal discharge. On February 10 severe pain developed in the right knee. Eight days later the patient was admitted to the Washington University Hospital. Her temperature at this time was 103 F. and leukocytes were 45,000. The patient looked ill, anemic and undernourished. There was a swollen and tender right knee. Thirty cubic centimeters of purulent fluid were aspirated from the knee-joint, from which no organism could be recovered. Repeated blood-cultures were taken and proved negative. The Widal reaction was negative. The fever gradually subsided and the leukocytes decreased to 10,000. An x-ray examination showed a normal joint.

During the first four days after admission the patient showed an inordinate craving for crackers, bread and cake, despite her pain and fever. An atypical Fehling's and Nylander's reactions were obtained in the urine during this time. The urine has been negative for sugar ever since, although the tolerance test was done.

A positive Wassermann test has been obtained from the child. The Wassermann test of the mother of the child is also positive.

At the time of admission the patient showed a discoloration of both feet. The right foot presented a swollen black area which included all the toes and extended laterally from the base of the great toe to outer side of the heel. The area was hot, dry and painful and itched. The left foot was much like the right in appearance except that the great toe was uninvolved. Pulsation of the posterior tibial artery and also the dorsalis pedis was present in both feet. The patient gives no history of exposure to cold. There is, however, a history of a sudden swelling of the left wrist and a black, sharply demarcated discoloration of the index finger, which occurred about a month before admission to the hospital, persisting three days and reappearing three days later. The same phenomenon has occurred twice while the patient has

been in the hospital; the first time remaining ten days, the second time clearing up over night. The gangrene of feet has progressed. The toes of the left foot sloughed away yesterday.

The case, then, presents a symmetrical gangrene of the feet, with a history of attacks of local asphyxia of the left hand, especially the index finger.

The transient character of the glycosuria excludes diabetes as the cause of the gangrene. A gonorrheal septicemia with emboli into the joints might be considered responsible for the symmetrical gangrene, were it not for the fact that a sepsis of this character has not been proven bacteriologically and a number of the symptoms make the diagnosis of gonorrheal infection of the joints an improbable one. The patient has congenital lues, and an obliterative endarteritis of syphilitic origin may possibly explain the condition. In many of its features the case is characteristic of Raynaud's disease. Several undoubted cases of Raynaud's disease have been reported where the etiological relationship of an acquired or hereditary syphilis has been definitely established. In the present case the Raynaud's disease and congenital lues may be coexisting and yet be unrelated. Anti-luetic treatment has had no influence in checking the progress of the gangrene.

DISCUSSION

DR. SACHS: I think it may be well worth pointing out that this case is also of interest from a surgical standpoint. It shows the wisdom in a case of dry gangrene of permitting a natural demarcation in preference to an amputation. Had a surgical attempt been made it would have been necessary to sacrifice a great deal more of the feet than the patient has been able to save for herself.

15. DEMONSTRATION OF A CASE OF HEREDITARY DEFORMITY OF THE HANDS AND FOREARMS.—By DR. A. O. FISHER

The patient, a man 26 years old, presents deformities of the forearms and the hands which have been present since birth. Both forearms are markedly shortened; the left more than the right. The hands turn in at the wrists making a right angle with the arm. Flail-joints are present at the wrists. The thumbs are absent on each hand. The fingers of the left hand, four in number, are distorted by contractures so that the terminal phalanges appear claw-like. The fingers on the right hand are normal in development and function.

Radiograms show a normal elbow joint on the left side, with an absence of the shaft of the radius except for rudimentary epiphysis at proximal end. The ulna is short with a marked outward bowing and shows an absence of the articular surface at the distal end. There is no bony articulation with the bones of the carpus. The carpal bones are only five in number and atypical in form. There are four normal metacarpal bones and the usual number of phalanges. The terminal phalanges are, however, markedly deformed. In the right forearm both the radius and the ulna are present. The elbow is normal. The shafts of both bones are deformed, the distal ends presenting no articular surfaces. The carpal bones are also atypical, and five in number, corresponding to those on the other side. The four metacarpals with the usual number of phalanges appear well developed.

The patient has one sister with a similar deformity. Another sister has but one thumb, while a brother has but rudimentary thumbs. The father of the family had no thumbs. The paternal grandfather and great grandfather had no thumbs. There is no history of deformity in the mother's family.

The patient has a daughter, 2 years old, who has thumbs that vary from the normal in that they resemble the other fingers of the hand. The various deformi-

ties of the hand, illustrated in part by the case presented, have been found to be transmitted through five generations.

DISCUSSION

DR. TERRY: As Dr. Fisher has said, reports of such cases are not common, and records of cases in which history of inheritance of this defect is pointed out are rare. Dr. Fisher's report is valuable, particularly in presenting the family history of the hereditary transmission of absence of radius and thumb. I hope that it will be possible to get together the data which concern this hereditary deformity in five generations and publish them. I think it is exceedingly important that this be done.

16. A FAMILY WITH HEREDITARY CATARACT.—By DR. C. H. DANFORTH

A woman born with congenital cataract in 1861 has, up to the present time, ten descendants, eight of whom are similarly affected. Her only brother, who has normal eyes, also has ten descendants, none of whom have cataracts. In this family cataract behaves as a Mendelian dominant. Available clinical histories are not complete, but they do reveal something as to the nature of the cataract and the extent of its variability within the group. The observations of von Szily show that certain congenital cataracts are due to a definite cell complex within the embryonic lens. Whether or not this is the case in the family under consideration cannot be stated. In these patients, however, the retina seems also to be defective and it may be that this has an unfavorable effect upon the lens. In this same family are also to be found cases of marked nystagmus and individuals with a slightly inferior mentality. These two peculiarities have been shown by students of hereditary to be heritable, one as a Mendelian dominant, the other as a recessive. It is found that the three characters mentioned are apparently transmitted independently of each other, so that various combinations have resulted in the latest generation. Nystagmus, however, is not present in either of the two children without cataracts. From these observations it seems highly important that, in the analysis of such family histories as the one under discussion, a careful attempt be made to differentiate the separate heritable entities that may be involved.

DISCUSSION

DR. ALT: Dr. Danforth's paper refers only to congenital cataract, and while I have seen and operated on many such cases, I have not been able to follow up the family history in the manner he has done. I have once, however, at the same time operated on a grandmother and her two grandchildren. The grandmother had senile cataract and the two grandchildren congenital lamellar ones. The father and mother were normal, as far as the eyes were concerned, but had been cousins, which complicated this case. I have also operated in one family on nine cases of senile cataract in which the late Dr. J. Green had also operated on a number of cases. The last member of this family I operated on, a physician, said he was the forty-fifth case in that family. Here we have perhaps a series of hereditary senile cataracts. I also operated thirty-two years ago on an old lady for senile cataract and about seven years ago on her daughter, also for senile cataract. What theory is there to explain the heredity in senile cataracts? Has Dr. Danforth any?

DR. SCHWAB: I should like to inquire whether the nystagmus in cases of cataract is not an acquired characteristic rather than an inherited one?

DR. TERRY: I would like to know something about the conditions in which this family lived; how do the members earn their living?

DR. DANFORTH (closing): Dr. Nettleship went into the literature on senile cataract quite thoroughly. I

do not venture an opinion as to how far senile cataract may be considered as comparable to the congenital forms, especially in such cases as Dr. Alt cites. If the explanation suggested by Szily be accepted, certainly they could not be the same. However, Nettleship has histories running through as many as six or eight generations in which senile cataract does occur and is inherited in quite the same manner as this. The two may be related, or they may not, but in any event the mode of inheritance is quite the same.

In regard to the nystagmus, I think the text-books are inclined to regard it as an acquired characteristic. Nevertheless, as I understand the data collected by Loeb, it does often follow an hereditary course and may occur without necessarily being associated with other specific eye defects. The fact that some of these individuals do and some do not show it where the cataracts are the same leads me to think that the thing itself, or a predisposition toward its development, is hereditary.

As to the question of how they earn their living, I cannot say much on that. I have visited them, not infrequently, and about all the evidence I have seen is some signs which read "I am blind."

17. HUMAN DISSECTION IN THE STUDY OF HEREDITY.—By DR. ROBERT J. TERRY

Variations encountered in the dissection of the human body present material for the study of human heredity which has received scant consideration. For several years past our laboratory has made separate records of all variations found in the course of dissection of a number of cadavers. These individual groups of variations are very interesting. By means of the hospital number accompanying the cadaver, it has been found possible to locate living relatives. Ordinary methods of physical examination of the living will, in many cases, reveal the presence or absence of the condition in question. Autopsy would be necessary in other cases. Thanks to education, popular feeling on the subject of autopsy has changed and we are beginning to have cooperation from the intelligent public, instead of opposition, toward investigations which involve examination of the dead body. Complete dissection of the bodies of members of the same family, with the object of supplying data for the study of human heredity, should come to be regarded in the same light as the autopsy for the purpose of increasing our knowledge of disease.

18. JOINT ANKYLOSIS: AN EXPERIMENTAL STUDY.—By DR. NATHANIEL ALLISON and DR. BARNEY BROOKS

In one series of experiments the articular surfaces of the knee-joints of dogs were destroyed by either scraping off the cartilage with a curette or by partial excision of the joint. The animals were sacrificed at varying periods of time and the joints studied by means of x-ray photographs, dissection and microscopical examination. It was found that there was a union of the bones in the joint by granulation tissue which grew from the marrow of the cancellous bone. Subsequently the bones became united by dense fibrous tissue, and there was finally a slow process of direct transformation of this fibrous tissue into bone. Actual bony ankylosis was developed so slowly that in one experiment it had not been completed eleven months after destruction of the joint cartilages.

In another series of experiments the pathological changes in joints as a result of infection were studied. It was found that following the infection of the cavity of the joint there was an immediate collection of a purulent exudate in the joint associated with a marked proliferative process in the synovial endothelial cells. There was at the end of four days a beginning of destruction of the articular cartilage around its

margins. There was also a marked inflammatory reaction in the marrow of the cancellous bone immediately under the cartilage, in which the cartilage was destroyed by granulation tissue from beneath. At the end of two days there were large areas of cartilage destroyed so that the joint ends of the epiphyses were covered only by granulation tissue. The destruction of the cartilage led to a condition which was similar to that following the aseptic destruction of cartilage.

The demonstration that actual bony union between epiphyseal bone is a very slowly progressing process explains why fractures in or about joints heal less quickly than those in the shaft. It also explains why the movable joint, following one of the various methods of arthroplasty, after the course of some months grows stiff again. And finally it emphasizes the point that in the attempt to produce a movable joint by surgical methods, the object of the operative method should be the prevention of a fibrous ankylosis rather than a bony ankylosis.

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ST. LOUIS MEDICAL SOCIETY

Meeting of the General Society

APRIL 4, 1914

The meeting was called to order at 8:45 p. m. by the president, Dr. A. F. Koetter.

The scientific program consisted of the following: Dr. William Coughlin reported a case of fracture of the radius with exhibition of patient.

Dr. Norvelle W. Sharpe read a paper entitled "A Survey of the Problem of Surgical Shock."

Discussion by Drs. Major G. Seelig, Wm. T. Coughlin, J. McH. Dean, C. Shattinger, J. L. Boehm; Dr. Sharpe closing.

Dr. Francis L. Reder read a paper entitled "Remarks on Blood Transfusion," illustrated with lantern slides and exhibition of a glass tube used for indirect transfusions.

Discussion by Drs. O. L. Elbrecht, John McH. Dean, Wm. Coughlin; Dr. Reder closing.

Because of the late hour, Dr. George Richter requested that his paper entitled "Mistakes Made in Taking and Interpreting Blood-Pressure Readings" be postponed to a later date, which was granted.

Dr. Frank J. Lutz proposed the following resolutions which, on motion, were unanimously adopted:

"The St. Louis Medical Society has learned with grave concern that the army appropriation bill just passed by the Senate of the United States contains a provision whereby the Surgeon General's Library is to be transferred to and become a part of the Library of Congress.

"To make the largest, best equipped, best conducted medical library in the world, which through the index catalogue, furnishes bibliographical data for all the physicians, medical educational institutions and scientific medical associations, and which is accessible to the medical men of all sections of this country, a subordinate to department of a general library is in the opinion of this society a reactionary and unwise policy which would lower the scientific standing of the United States in the eyes of the civilized world. To rob the magnificent surgeon general's library of its autonomy would prevent it from continuing its splendid work which can be done only if the library is in charge of carefully chosen, scientific medical men; it would

entail additional and unnecessary expense upon the people, and the usefulness of the library would be seriously impaired.

The secretary of this society is hereby instructed to convey this expression of our disapproval of the proposed transfer to the Missouri members of the House of Representatives with the respectful request that they make every endeavor to prevent this unjustifiable and destructive legislation."

Dr. C. M. Nicholson moved these resolutions be wired to each member of the House of Representatives from Missouri.

Seconded and carried.

Dr. A. S. Barnes, Jr., read the following report:

The Health and Public Instruction Committee wish to report that the Infectious Disease Hospital Bill will become a law in ten days. About July 1 work is to commence on the two buildings. The contractors will have eighteen months to complete these buildings. It will be necessary to get \$90,000 more, which has been promised.

On motion the society adjourned at 11:10 p. m.

Attendance 123.

F. C. E. KUHLMANN, Secretary.

Meeting of the Council

APRIL 8, 1914

The meeting was called to order at 8:40 p. m. by the president, Dr. A. F. Koetter, in the chair.

The application of Dr. Frank J. Tainter of St. Charles, Mo., for corresponding membership was read for the second time. Dr. Tainter was elected to corresponding member of the St. Louis Medical Society.

The application of Dr. A. H. Cleveland for active membership by transfer from the St. Clair County (Ill.) Medical Society was read for the second time. Dr. Cleveland was elected to active membership.

Dr. Amerland moved and it was seconded that Dr. George M. Kesi be elected an associate member. Carried.

Dr. C. E. Burford, chairman of the House Committee, read a letter from Miss Elizabeth Moore, Secretary of the Baby Welfare Board of Visiting Nurse Association, asking for permission to hold an occasional meeting at the society's building. On motion the Baby Welfare Board was granted the use of the parlor without charge.

Dr. A. H. Sewing, chairman of the Membership Committee, reported favorably on the following applicants, all of whom were elected by ballot:

Dr. Bernhard Wm. Klippel, City Hospital.

Dr. Clifford F. Busard, 3933 S. Broadway.

Dr. Joseph F. Snedec, 3933 S. Broadway.

Dr. J. C. Kopelowitz, 4350 Cook Ave.

Dr. Martin Van Raalte, 2827a Whittier St.

Dr. Hans Lissner, Washington University Hospital.

Dr. Frank J. Lutz, chairman of the Library Committee, read the following report:

"Your Library Committee begs leave to make the following report for the month ending March 31: A number of physicians, all of them of the St. Louis Pediatric Society, have requested the committee to continue the subscription for the *Jahrbuch für Kinderheilkunde* and the *Zeitschrift für Kinderheilkunde*, which was ordered discontinued March 11. The committee has complied with the request of the members. We wish also to inform you that there will be found in the future upon our shelves the new journal, *Strahlentherapie*, which presents in accessible form the progress which is being made in the treatment of disease by means of emanations. The committee is of the opinion that the library hours should be printed in a conspicuous place on the front page of the *Bulletin*."

The librarian made the following report:

"During the month of March, 1914, there were added 102 books, 176 books and journals were consulted, 28 books and bound journals were loaned to members, and there were 158 visitors to the library, making an average of about seven per library day. This is a gratifying increase. The committee is glad to report of the increasing interest in the library by the members."

On motion the library report was accepted.

The president stated that he will call a meeting of the delegates to the State Association on Saturday evening, April 11, and inquired of the treasurer how many members have paid their dues up to April 1. The treasurer stated that 527 members have paid up to April 1, which entitles the society to eleven delegates to the Missouri State Meeting. He also stated that up to the present time 560 members have paid their dues.

Dr. Robert M. Funkhouser moved and he was seconded that the delegates should arrange for a conference with the Committee on Defense of the Missouri State Association. Carried.

The secretary read a letter from Dr. A. F. Bock, expressing his appreciation and hearty thanks for placing him on the Honor membership list.

The secretary read the following letter from the North Missouri Medical Association:

April 4, 1914.

Secretary of the St. Louis City Medical Society,
St. Louis, Mo.

As you are probably aware, there is a concerted move on the part of the medical societies all over the country for the employment of non-partisan commissions, especially in personal injury suits. In consonance with this movement the North Missouri Medical Association, at its meeting last June, unanimously adopted the resolution as follows:

Be it resolved by the North Missouri Medical Association that the suggestions offered in the paper entitled "A Plea for the Establishment and Recognition of Nonpartisan Commissions Appointed by the Court," read by our president, Dr. E. S. Smith, meet with our hearty approval, and to the end that such suggestion may get to the profession at large throughout the state, and through the profession to the next legislature of the state in the form of a carefully prepared bill. We do hereby pledge the association and the members thereof to all earnest effort to induce the next legislature of this state to enact such legislation as will prohibit the use as witnesses of specially employed medical experts in any litigation, whether civil or criminal, and make provision for the appointment of court experts in every case, whose compensation shall be fixed by the court and who shall be paid out of a fund provided for that purpose.

This matter will be brought before the House of Delegates at the State Medical Association in Joplin and we are asking of your county society that it instruct your delegate to consider favorably this resolution when it comes up before the association next month.

Faternally yours,

E. S. SMITH.

On motion the communication was referred to the Committee on Health and Public Instruction, asking them to report their recommendations to the general society as early as possible and that a copy be sent to the delegates and the Defense Committee of the Missouri State Medical Association.

Dr. Hamel moved that the pictures of the various ex-presidents be removed from the auditorium and hung in the parlors of the society. Seconded and carried.

Councilors present: Drs. J. Henry Amerland, Malcolm A. Bliss, C. E. Burford, Robert M. Funkhouser, Roland Hill, Frank Hinchey, Philip Iffmann, F. J. V. Krebs, Wm. H. Stauffer, Phelps G. Hufford, A. H.

Hamel; Drs. A. F. Koetter and F. C. E. Kuhlmann, ex-officio.

Councillor excused: Dr. Walter B. Dorsett.

Visitors present: Drs. John W. Marchildon, A. H. Sewing, Robert Barclay, Marsh Pitzman and F. J. Lutz.

On motion the council adjourned at 10:35 p. m.

Meeting of the General Society

APRIL 11, 1914

The meeting was called to order at 8:50 p. m. by the first vice-president, Dr. A. H. Meisenbach.

The scientific program consisted of the following:

Dr. George Richter read a paper entitled "Mistakes Made in Taking and Interpreting Blood-Pressure Readings with Special Reference to Aneurysm," illustrated with lantern slides.

Discussion by Dr. Henry Jacobson.

A paper entitled "A Critical Analysis of a Series of Seventy Neuro-Surgical Cases," illustrated by lantern slides, was read by Dr. Sidney I. Schwab and Dr. Ernest Sachs.

Discussion by Drs. W. C. G. Kirchner, O. H. Elbrecht and Meyer Wiener; Dr. Schwab and Dr. Sachs closing.

On motion the society adjourned at 11:10 p. m.

Attendance 118.

Tentative Programs

SATURDAY, APRIL 25, 1914

1. State Medical Legislation from the Viewpoint of the Physician....Dr. W. S. Allee, State Senator
2. State Medical Legislation from the Viewpoint of the Lawyer.....
Hon. John T. Barker, Attorney General of Missouri

SATURDAY, MAY 2, 1914

Cancer of the Breast and Its Treatment (illustrated).....Dr. Wm. L. Rodman, Philadelphia

SATURDAY, MAY 9, 1914

1. The Use of Blood-Serum of Immunes in the Treatment of Malignant Scarlatina.....
.....Dr. Wm. S. Barker
2. The Prevention and Treatment of Vulvo-Vaginitis in Children.....Dr. Fred. Taussig

SATURDAY, MAY 16, 1914

Exclusion of the Pyloric Portion of the Stomach. (An experimental and clinical study.).....
.....Dr. Willard Bartlett

SATURDAY, MAY 23, 1914

A clinic on cardiac diseases.

SATURDAY, JUNE 6, 1914

1. Medical Education.....Dr. E. P. Lyon
2. The Mounds and Mound Builders, illustrated with colored lantern slides....Dr. H. M. Whelpley
F. C. E. KUHLMANN, Secretary.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI (ST. LOUIS)

The March meeting of the Medical Society of the City Hospital Alumni was held at the City Hospital on Thursday evening, March 5, 1914, at 8:30 o'clock. The president, Dr. L. J. Oatman, presided. The meeting was well attended, the attendance being seventy. The program was very instructive and interesting and elicited a great deal of discussion. The usual order of business was suspended and the program proceeded with.

Program

1. Presentation of Cases and Specimens: (a) Case of Pellagra; (b) Case of Amebic Dysentery, with

Specimen of Ameba Tetragina—Dr. E. N. Toby. (c) Unusual Pathological Specimen—Dr. S. A. Baldwin. 2. Pellagra in City Hospital—Dr. A. H. Fortner. Discussion by Drs. George Dock, M. F. Engman, Joseph Grindon. 3. One Hundred Cases of Lobar Pneumonia, with Special Reference to Treatment—Dr. Frank Jolley. Dr. Behrens opened discussion. Drs. Tuttle, Dock and Monte Meyers also discussed. Dr. Jolley closed.

The treasurer read the resignation of Dr. Roy Belaires, of LeMars, Ia., which was accepted.

Dr. C. H. Shutt suggested that the society ought to have some kind of projecting apparatus for lantern slides. He moved that the society purchase one and have it installed in the hospital for the society's use. Seconded by Drs. Behrens and S. S. Burns. Adopted by unanimous vote. Chair appointed Drs. Shutt, Kirchner and Behrens on this committee.

Dr. Shutt read a short report from the Executive Committee, recommending the following to active membership: Dr. Charles H. Burdick, Dr. Thomas B. Butler, Dr. Edwin C. Ernst, Dr. A. C. Leggat, Dr. A. C. Vickery. All were elected to active membership by unanimous vote.

The application of Dr. C. P. Dyer was given its first reading.

The program for the April meeting follows:

1. Specimens from Autopsies and Operations During March, Dr. F. A. Baldwin; 2. Review of Cases (20) of Tubercular Meningitis in City Hospital During Past Year, Dr. N. F. Moore. Discussion by Dr. G. Canby Robinson, Dr. Frank Fry, Dr. C. G. Chaddock and Dr. Given Campbell. 3. A Hundred Cases of Typhoid Fever in City Hospital, with Special Reference to Treatment and Complications. Discussion by Drs. George Richter, Walter Baumgarten, Albert Tausig, Elsworth Smith, W. P. Elmer, L. H. Hempelmann and W. C. G. Kirchner.

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CASS COUNTY MEDICAL SOCIETY

The regular bimonthly meeting of the Cass County Medical Society was held in the rest-room at the courthouse, Thursday, April 16, and while the attendance was not large the interest in the proceedings was great.

Those present were: Dr. M. P. Overholser, vice-president; Dr. H. S. Crawford, secretary; Dr. W. F. Chaffin of Raymore, Dr. H. Jerard, Dr. W. A. Fair and Dr. R. P. Yeagle of Pleasant Hill, Dr. R. D. Ramey of Garden City and Dr. A. R. Elder and Dr. J. S. Triplett of Harrisonville. The visitors were Dr. E. H. Miller of Liberty, president of the Missouri State Medical Society, and Rev. Ernest T. Raney, pastor of the Harrisonville M. E. Church, South.

Dr. Miller was elected an honorary member of the Cass County Medical Society, and in a neat speech thanked the members for the honor. He then addressed the society at some length, taking for a subject, "Preventive Medicine and Medical Organization." The address was an excellent one, replete with good suggestions for both the profession and those who had need for medical treatment.

This was followed by a discussion of the quarantine laws of the state, most of the members taking part.

The society endorsed the movement recently inaugurated by the Northeast Missouri Medical Society to do away with medical experts in criminal and other cases

in the courts, and recommended the passage of a law allowing judges of courts to appoint, where necessary, a medical commission in such cases and fixing the fees to be paid such commission.

The matter of assisting in the organization of a county society for the relief and control of tuberculosis was referred to the tuberculosis committee of the society, which is composed of Dr. M. P. Overholser, Dr. H. S. Crawford, Dr. T. W. Adair, Dr. Frank B. Ellis, Dr. S. W. Fair, Dr. H. Jerard and Dr. W. F. Chaffin.

The next regular meeting of the society will be held on Thursday, June 11, 1914, at 1:30 p. m.

H. S. CRAWFORD, M.D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society held its quarterly meeting in Owensville, Thursday, April 9. The following members were present and participated in the scientific program: Fred Aufderheide, J. W. Burgess, J. O. Cooper, John J. Ferrell, J. E. Jose, John J. Radmacher, William E. Johnson, M. E. Spurgeon and John D. Seba.

The following visitors were present: W. S. Allee of Olean, O. H. Brown and Carroll Smith of St. Louis, I. M. Owens of Leslie, H. G. Isenberg of Charlestown, W. C. Miller of Labaddie, and Dr. Shudde of Sullivan.

Dr. M. E. Spurgeon delivered a lecture on "Empyema." John D. Seba read a paper on "Will a Eugenic Law Improve or Better the Human Race?" H. G. Isenberg read a paper on "Bronchitis." O. H. Brown delivered a lecture on "Syphilis," and Carroll Smith delivered a lecture on "Local Anesthesia." This concluded all of the scientific subjects discussed. All the doctors present participated in the discussion of the various subjects presented.

The clinics presented were only a few, but they were of unusual type and much was learned from them.

Dr. F. Aufderheide made an appeal on the subject of "Quit kickin' my dawg aroun'," and Dr. I. M. Owens made a speech on "Cresento." They were simply heart-to-heart talks and were delivered for the interest of the society.

There was an open session at night to which the public was admitted. This meeting and the scientific meetings were held in Hennicke's spacious hall. The Owensville band furnished music for the public meeting.

At the public meeting Dr. Carroll Smith of St. Louis spoke on cancer. He gave statistics and told how many people perished of cancer annually.

Dr. O. H. Brown of St. Louis spoke on the germ theory of disease and enumerated the various diseases caused by germs and how to avoid infection.

Dr. W. S. Allee of Olean spoke on the necessity of medical laws regulating the practice of medicine and their enforcement in order to protect the public against unscrupulous imposters who care but very little for the public health, but have a selfish motive in securing money from the hopelessly sick by promising them a cure and taking large fees and not returning value received. The open session was a pronounced success.

JOHN D. SEBA, M.D., Reporter.

HOLT COUNTY MEDICAL SOCIETY

The Holt County Medical Society met in regular session in the office of Dr. J. W. McClanahan in Forest City with Vice-President Dr. Thatcher in the chair. Owing to an affliction of the eye Dr. Nauman was unable to be with us.

After routine business of the society we were entertained by an interesting paper on "Eclampsia" by Dr. J. M. Tracy of Mound City.

Dr. D. L. Harman of Forbes, and Dr. B. W. Babcock of New Florence, who have recently located in the county, were elected members.

Dr. E. F. Kearney has recently removed to St. Joseph. Dr. J. L. Hogan of Forbes has sold to Dr. L. D. Harman, but has not yet decided where he will locate.

Those present were: Drs. Bullock, McClanahan, J. L. Hogan, F. E. Hogan, J. M. Tracy, J. M. Davis, Evans, Thatcher, Harman, Babcock and Wood.

The next meeting will be held at Bigelow, Thursday, July 2, 1914.

W. S. Wood, M.D., Secretary.

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HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at 2:30, Friday, April 3, 1914, Dr. T. J. Payne, president, in the chair.

The minutes of the meeting of Nov. 7, 1913, were read and approved.

Members present: Drs. Bonham, Lee, Wright, Magee, Moore, Payne and Watts.

There were no clinical cases presented for discussion. Drs. Moore and M. N. Smith were continued on the program for the next meeting, Friday, May 1, Dr. Moore on "Urinary Calculus and Enlarged Prostate," Dr. M. N. Smith on "Adenoids."

The report of the hospital committee was postponed until the next meeting on account of the absence of the chairman, Dr. A. B. Burgwin. After miscellaneous business, Dr. Lee gave us an informal talk on puerperal septic fever, septicemia and treatment.

The secretary requested that we have a full attendance and those who have not paid their dues do so at once, as the state meeting will be held May 12 to 14 at Joplin.

Society adjourned at 3:30 p. m. to meet again Friday, May 1, 1914.

C. W. WATTS, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

The scientific programs of the Jackson County Medical Society for the past month have been most varied. Twice during the month men from the faculty of the University of Kansas presented experimental work.

On the night of March 24 Prof. L. E. Sayre of the University of Kansas, presented "A Modern View of the Pharmacological Action of Medicinal Agents from the Viewpoint of Molecular Structure or Organic Compounds." This was followed by a demonstration of the instrument used in the phenolsulphonephthalein test by Prof. Nelson, also of the University of Kansas. Dr. Roy Cross presented a paper on "Chemical Action of Certain Antiseptic Agents."

On the night of March 31 Dr. D. E. Broderick presented cases: (1) Double congenital club foot. (2) Extravasation of the bladder with urethra implantation. (3) Pathological specimen of the same condition. (4) Chronic infectious polyarthritis. (Still.) (5) Two cases of congenital hypertrophic stenosis.

On the night of April 7 Dr. W. L. McBride discussed "Urticaria and Toxic Erythema," and Dr. I. J. Wolf presented at some length a paper entitled "Twenty-four Hours on the Firing Line in the Life of a Physician." In this he outlined the work and discussed cases seen in a day by the busy practitioner.

On the evening of April 14 Prof. John Sundwall of Lawrence, Kan., gave a talk on "Histology and Physiology of the Hypophysis," and Dr. M. A. Hanna presented the subject of "The Hypophysis and Pregnancy."

On the evening of April 21 there was no meeting due to the fact that on the night of April 22 a special literary and dramatic program under the auspices of the Kansas City Medical Library Club was given. The program for this meeting was as follows:

PROGRAM FOR LITERARY AND DRAMATIC EVENING

Wednesday, April 22, 1914, 8 p. m., at the University Club, Eleventh and Baltimore. (No meeting Tuesday evening.)

1. "The Educational Value of the Medical Society."
..... William Osler
Read by P. T. Bohan.
2. Biographical Sketch: "Edward Jenner; Lessons from His Life".....J. Q. Chambers
3. Report Upon the Kansas City Medical Library Club.....J. W. Kimberlin, Secretary
4. "Medical Libraries".....Oliver Wendell Holmes
Read by L. S. Milne.
5. "The Doctor's Dilemma."

A satirical farce by George Bernard Shaw.
Produced and staged under the direction of Mr. Marens Ford, dramatic personae.

(In the order of their appearance.)

- Redpenny, assistant to Sir Colenso Ridgeon.....
.....Dr. Edwin H. Schorer
- Emmy, serving woman to Sir Colenso Ridgeon....
.....Dr. W. L. McBride
- Sir Colenso Ridgeon, who has just been Knighted..
.....Dr. Logan Clendenning
- Dr. Shoemaker, an old college mate of Sir Colenso
.....Dr. H. P. Kuhn
- Sir Patrick Cullen, an old English doctor.....
.....Dr. Carl Bryant
- Sir Cutler Walpole, a surgeon.....Dr. E. H. Skinner
- Sir Ralph Bloomfield Bonnington, an eminent
internist.....Dr. W. S. Sutton
- Dr. Blenkinsop, a physician in the London tene-
ments.....Dr. V. W. McCarty
- Mrs. Dubedat, who consults Sir Colenso regarding
her husband.....Dr. E. H. Schorer

The scene takes place in the consultation room of Sir Colenso Ridgeon, who has just been Knighted by the King, in the year 1903.

There are five acts in "The Doctor's Dilemma," but only the first act will be staged as this introduces the medical characters. The other four acts round out the humor of the farce but are too much of an undertaking at this time.

"Tis a bitter pill — but good physic."

EDWIN HENRY SCHORER, M.D.

KNOX COUNTY MEDICAL SOCIETY

The Knox County Medical Society met in response to a call of the president, H. J. Jurgens. The following officers were elected for the ensuing year: President, Dr. George Brown; vice-president, Dr. H. H. St. John; secretary-treasurer, Dr. H. J. Jurgens; censors, Dr. Robert McReynolds for three years, Dr. James Keaney for two years; delegate to state meeting, Dr. H. J. Jurgens; alternate, Dr. F. E. Luman.

Applications for membership were received from the following: Drs. Urial McReynolds, Robert McReynolds, Knox City; J. W. Haden, Plevna; B. Humphrey, Hurdland; A. D. Gray, Hurdland and James Keaney, Edina. The rules being suspended were elected by acclamation.

Dr. George Brown in a short speech accepted the presidency, urging the active cooperation of all members and regular attendance at all meetings.

Dr. Jurgens reported the receipt of a letter from Dr. Crank, councilor of the Sixth district, asking for a meeting of the society at which he and Dr. Goodwin might be present. The secretary was instructed to communicate with the councilor urging him to set a date that will suit his own convenience.

It was suggested that a good man of reputation be asked to address the society some time in the future. President Brown promised to have at least two such men.

It was decided that meetings henceforth shall be held monthly, the first Monday of each month being chosen.

The president appointed the following as a committee to confer with the county court relative to a subsidy for a T. B. campaign, similar to the one of last year, but on a more extensive scale: Drs. R. McReynolds, F. E. Luman, A. D. Gray and H. J. Jurgens.

Drs. A. D. Gray, Robert McReynolds, Urial McReynolds and James Keaney paid their dues for the ensuing year.
H. J. JURGENS, M.D., Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular monthly meeting at Clarksville, April 6, in the office of Dr. J. E. Bankhead. Dr. E. M. Bartlett, the president, presiding. The following members were present: Drs. J. E. Bankhead, J. H. Story and E. M. Bartlett, Clarksville; Drs. C. L. Bankhead, R. J. Guy, Paynesville; Drs. T. G. Hetherlin and J. W. Dreyfus, Louisiana, and Dr. F. V. Keeling, Elsberry.

Dr. J. E. Bankhead presented a very interesting case for examination.

Dr. C. L. Bankhead presented two cases for clinical purposes.

Dr. R. J. Guy read a paper entitled "Gall-Stones." This was followed by a general discussion.

Dr. J. H. Story gave the society a very interesting talk on eugenics, which was followed by a very profitable discussion.

Dr. T. Guy Hetherlin was selected delegate and Dr. E. M. Bartlett alternate to the state meeting at Joplin.

The next meeting will be held at Louisiana, May 4, 1914.
F. V. KEELING, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at Humansville in the K. P. hall, 11 a. m., Tuesday, March 10, 1914.

The following members were present: Drs. R. W. Paris, R. Lee Russell, A. J. McLaughlin, R. D. Hill, A. J. Stufflebam, C. H. Brown, C. N. Hahn, W. G. Drake and J. F. Roberts; also honorary members Drs. E. C. Roseberry and C. W. Russell of Springfield.

After the reading and approval of the minutes of the last meeting, Dr. W. Glenn Miller of Morrisville was elected a member of the society.

Scientific contributions were taken up and Dr. R. W. Paris read a paper on tuberculosis of the kidneys, which was discussed by Drs. C. W. Russell and R. W. Paris.

Dr. C. W. Russell read a very interesting paper on hydronephrosis, its causes, symptoms, treatment, etc., which was discussed by Drs. Roseberry, Paris, Russell and others.

The society adjourned for dinner at the hotel at 1 p. m.

At the afternoon session Dr. C. H. Brown read a very interesting paper on the effects of pituitrin in some twenty cases of confinement.

Dr. E. C. Roseberry of Springfield read an interesting paper on cholecystitis, giving its causes, symptoms, treatment, etc.

Dr. J. F. Roberts read a paper based on two cases of procidentia uteri. The cases were well discussed by the members.

Dr. A. J. Stufflebam was excused from reading his paper on diabetes mellitus on account of the patient being absent and was requested to present the same at the next meeting.

Dr. A. J. McLaughlin made a verbal report of some cases in his practice.

On motion a vote of thanks of the society was extended to the physicians of Humansville for their entertainment at dinner; also to the K. P. lodge for the free use of their hall for the meeting.

By invitation of Dr. A. J. McLaughlin, at the request of Mrs. McLaughlin and Mrs. Meyers, the doctors' wives were invited to meet with the society at Aldrich on the second Tuesday in June, 1914.

J. F. ROBERTS, M.D., Secretary.

NO CERTIFICATES WILL BE REQUIRED WHEN PURCHASING TICKETS TO JOPLIN MAY 12, 13, 14 FOR THE ANNUAL SESSION. THE FARE WILL BE TWO CENTS PER MILE EACH WAY.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in the office of Dr. Wm. H. Westcoat at Oran, Monday, April 6, 1914. The following members were present: Drs. L. O. Rodes, president; G. S. Cannon, Secretary; W. S. Hutton, J. A. Miley, T. V. Miller, A. A. Mayfield, Fred Oglivie, P. S. Tate, J. A. Cline, W. H. Westcoat, M. L. Underwood, Wm. O. Finney, L. S. Mayfield and T. R. Frazer.

Dr. H. S. Winters made application and was admitted to membership.

Dr. Westcoat reported on "Tabes Dorsalis," and Dr. Finney on "County Obstetrics in Comparison to Statistics."

This was a very successful meeting and the members are showing a continuous interest in society work.

The next meeting will be held at Benton the first Monday in July.

G. S. CANNON, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew Medical Society was held at its rooms, Wednesday evening, April 1. President J. J. Bausbach in the chair. There were twenty-one members present. The minutes of the previous meeting were read and approved.

A communication from Dr. E. J. Goodwin, state secretary, was read, requesting this society to select a member who would read a paper at the next state meeting. Dr. Caryl Potter was selected by the president and accepted the invitation. His subject will be "Cervical Ribs."

On motion of Dr. Ballard, seconded by Dr. Fassett, our delegates were instructed to invite and make efforts to secure the next annual meeting of the Missouri State Medical Association to be held in St. Joseph for the year 1915.

The secretary was instructed to write Dr. C. R. Woodson a letter of condolence following the death of his son, Paul Woodson.

Dr. Lynch called attention to the liberal advertising by the local druggists of cure-all remedies and their connection with national distributors of these remedies, which are in conflict with the ethical practice of pharmacists, and on motion the secretary was instructed to draw up resolutions and have the same

printed in the *Bulletin* and to send a copy of the *Bulletin* containing these resolutions to every pharmacist in the city of St. Joseph. The resolution follows:

WHEREAS, The support and influence of members of the St. Joseph-Buchanan-Andrew County Medical Society is pledged to ethical druggists, and

WHEREAS, This society defines ethical druggists as druggists who are not members of cooperative associations exploiting cure-all remedies for every known disease, and

WHEREAS, This society furthermore condemns the increasing practice of counter prescribing and of the wide publication and persistent offering of promiscuous remedies for every known disease, therefore, be it

Resolved, That all members of the above society are urged to withdraw and divert their patronage from such druggists as are conducting their business along the above lines.

Attention was called to the Nichols Cancer Hospital at Savannah, Mo., and Dr. Martin of Savannah was instructed to ascertain whether the head of this institution was a duly registered physician, and if not, the secretary was instructed to take the matter up with the State Board of Health.

The application of Dr. Phene Skinner having received its second reading and the indorsements of the censors, was balloted on and the doctor was duly elected a member of this society.

An exceedingly interesting paper by Dr. E. S. Ballard on "Prevention of Infant Mortality" was read, and it was discussed by the following members: Drs. Lau, Ferguson, William, Lynch, Gregory and Gebhardt, Dr. Ballard closing.

W. F. GOETZE, M.D., Secretary.

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at its rooms Wednesday evening, April 15. President J. J. Bausbach in the chair with twenty-four members present.

A communication from Dr. E. S. Smith, president of the North Missouri Medical Association, was read, requesting the assistance of our society for the purpose of securing a "legislative enactment and the passage of a law which will prohibit the use as witnesses of specially employed medical experts in any litigation, whether criminal or civil, and make provision for the appointment of court experts in every case, where compensation shall be fixed by the court and who shall be paid out of a fund provided for that purpose."

On motion of Dr. Woodson, seconded by Dr. Fassett, this society endorsed and pledged itself to support the enactment of a law favoring the provision. Carried.

The application of Dr. O. A. Schmid was read for the first time and referred to the board of censors for their investigation and endorsement.

Dr. A. L. Gray entertained the society with a paper on "The Use and Abuse of the Obstetrical Forceps." The paper was discussed by Dr. C. R. Woodson, the discussion being closed by Dr. A. L. Gray.

W. F. GOETZE, M.D., Secretary.

WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society met in Dr. Toney's office at Piedmont, April 14, with Dr. R. J. Owens presiding. The following members were present: Dr. R. J. Owens, Mill Spring; Drs. Price, McGhee and Sebastian, Williamsville; Drs. G. W. and L. E. Toney and J. E. Gilman, Piedmont, and Dr. W. S. Bailey, Leeper.

The secretary announced that Dr. G. W. Toney had been appointed county committeeman on Health and Public Instruction to serve under our State Council.

Interesting cases were reported and discussed by those present. A committee was appointed to arrange a program for our next meeting at Greenville, June 2, 1914.

Dr. J. P. Sebastian was elected delegate and Dr. W. S. Bailey, alternate, to the State Association at Joplin. W. S. BAILEY, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since the publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SCARLATINA STREPTO-SEROBACTERIN, MCLFORD (IMMUNIZING).—A sensitized scarlatina streptococcic vaccine, sold in packages containing three doses of killed sensitized streptococci. (The Council has at present no means for determining the identity and purity of serobacterins and these must therefore be used on the guarantee of the manufacturer, alone) (*Jour. A. M. A.*, April 11, 1914, p. 1168).

PHENOLPHTHALEIN-AGAR.—Phenolphthalein-agar is agar-agar impregnated with phenolphthalein, 100 gm. containing 3 gm. of phenolphthalein. It has the properties of agar-agar augmented by those of phenolphthalein. The Reinschild Chemical Co., New York (*Jour. A. M. A.*, April 11, 1914, p. 1168).

CAUSTICKS (SILVER NITRATE 75 PER CENT.).—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of silver nitrate 75 per cent. and potassium nitrate 25 per cent. Each stick is to be used but once. Antiseptic Supply Co., New York.

CAUSTICK APPLICATORS (SILVER NITRATE 75 PER CENT.).—Wooden sticks $6\frac{1}{2}$ inches long, tipped with a mixture of silver nitrate 75 per cent. and potassium nitrate 25 per cent. Each stick is to be used but once. Antiseptic Supply Co., New York.

CUPRIC STICKS (COPPER SULPHATE 60 PER CENT.).—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of copper sulphate 60 per cent., alum 25 per cent. and potassium nitrate 15 per cent. Each stick is to be used but once. Antiseptic Supply Co., New York.

STYPSTICKS (ALUM 75 PER CENT.).—Wooden sticks $1\frac{1}{2}$ inches long, tipped with a mixture of alum 75 per cent. and potassium nitrate 25 per cent. Each stick is to be used but once. Antiseptic Supply Co., New York (*Jour. A. M. A.*, April 25, 1914, p. 1328).

PROPAGANDA FOR REFORM

THEOBROMIN SODIUM SALICYLATE VERSUS "DIURETIN."—Theobromin sodium salicylate, now described in New and Nonofficial Remedies and sold by most pharmaceutical firms, was first introduced under the therapeutically suggestive name "Diuretin." While under its proper title it can be bought for thirty-five to forty-five cents an ounce, the proprietary "Diuretin" costs \$1.75 an ounce. An examination in the A. M. A. Chemical Laboratory has demonstrated that the quality of the product as sold under its chemical name is equal to that sold as "Diuretin." In view of these findings physicians should learn to prescribe the drug by its chemical name (*Jour. A. M. A.*, April 4, 1914, p. 1108).

TONSILINE.—Newspaper advertisements assert that Tonsiline is "A quick, safe, soothing, healing antiseptic cure for sore throat." From an analysis made in the A. M. A. Chemical Laboratory it appears that a prepa-

ration like Tonsiline will be obtained by mixing 1 ounce of tincture of ferric chlorid, 1 ounce alcohol, 280 grains potassium chlorate with sufficient water to make one pint. It contains drugs whose use for the purposes for which Tonsiline is used are being abandoned. The objection to the indiscriminate use of Tonsiline, which represents a saturated solution of potassium chlorate, is evident (*Jour. A. M. A.*, April 4, 1914, p. 1109).

GOMEXOL.—Gomenol is a volatile oil which comes as a proprietary from France. The oil appears to be prepared from a plant closely related to that which yields oil of cajuput and the properties and therapeutic value of the two oils probably are about the same. Gomenol is sold under most extravagant claims (*Jour. A. M. A.*, April 4, 1914, p. 1110).

THE VALUE OF MINERAL WATERS.—The unprejudiced physician who is seeking to avail himself of the best therapeutic acids which modern medical science affords, cannot help being baffled by the conflicting claims made by the crude balneotherapy of to-day. He sees numerous cases in which relief has unquestionably been obtained by patients who have visited one of the many springs in this country or Europe; but when he attempts to analyze the possibilities—including rest, change of diet and environment—and to determine some standard by which he may intelligently advise those who need his help, the result is a hopeless confusion of ridiculous claims. At present mineral water therapy is a hopeless confusion (*Jour. A. M. A.*, April 4, 1914, p. 1097).

THE SERUM TREATMENT OF TETANUS.—The great value of antitetanus serum as a preventive is unquestioned. As a specific cure the serum has fallen short of expectation; nevertheless, it has decreased the mortality from tetanus. Tetanus antitoxin acts only on the toxin not yet combined with the nerve cells. This emphasizes the early and liberal use of antitoxic serum largely by intraspinal introduction in order to neutralize the toxin that still is free and on its way to the nerve-cells, the necessity of thorough cleansing of the wound to remove all source of continued intoxication, and of conserving the strength of the patient in the hope that the morbid process caused by the toxin already in the nerve-cells may be overcome (*Jour. A. M. A.*, April 11, 1914, p. 1174).

SALVARSAN THERAPY.—Wechselmann holds that the cases of salvarsan fatalities from encephalitis hemorrhagica were due to uremia, resulting from the irritation of the kidneys, in most cases damaged by administration of mercury. On the basis of this theory he argues for a pure salvarsan therapy in place of the generally combined mercury and arsenic treatment. He warns that salvarsan should be administered only after due consideration of the dose indicated and of the determination of absence of contra-indications. No one can dispute that nearly all the deaths from salvarsan have been caused by its indiscriminate use, either in the face of contra-indications or too large or too frequent dosage (*Jour. A. M. A.*, April 11, 1914, p. 1175).

WINE OF CARDUI.—Wine of Cardui has vogue among women who prefer to take their booze in the form of "patent medicines." It is sold by the Chattanooga Medicine Company. John A. Patten, reputed to be the chief owner, is prominent in the Methodist Episcopal Church organization. Wine of Cardui is advertised as a cure for all manners of female diseases and though containing 20 per cent. of alcohol, women and girls are advised to use it indiscriminately. Exami-

nation in the A. M. A. Chemical Laboratory makes it probable that Wine of Cardui is a hydro-alcoholic extract of blessed thistle, containing a trace of valerian and that its medicinal properties are due principally to its alcohol content—20.36 per cent. absolute alcohol by volume having been found (*Jour. A. M. A.*, April 11, 1914, p. 1186).

HYPEROL.—Hyperol is exploited by the Purdue Frederick Company as "A Utero-Ovarian Corrective and Tonic" and is asserted to be "Indicated in all functional diseases of women." It is claimed to contain hydrastin, aloin, iron salts, apiol and ergotin. A report of the Council on Pharmacy and Chemistry announces that Hyperol conflicts with the following rules of the Council: Rule 4, in that statements on the label and in the circular enclosed with the trade package advertise it to the public in the treatment of diseases; Rule 6, in that exaggerated and unwarranted claims are made for its therapeutic qualities; Rule 8, in that the name of this pharmaceutical mixture fails to disclose the potent constituents, and Rule 10, in that it is unscientific. The mixture is as unscientific as it is unnecessary. It cannot be adapted to any individual case; when ergot is indicated, apiol would naturally be contra-indicated; if aloes is appropriate, hydrastin may defeat the object sought. It is unnecessary because no intelligent physician would prescribe such a combination of drugs in any given case (*Jour. A. M. A.*, April 18, 1914, p. 1271).

FRIEDMANN VACCINE.—Referring to the exploitation of Friedmann's vaccine by Ex-Mayor Rose of Milwaukee, the *Southern Medical Journal* suggests that "Mr. Rose will be remembered by Alabama physicians as the apostle from the city made famous by certain brews of beer, who a few years ago came into our state to instruct from the public platform our people regarding the health-giving properties of alcoholic beverages. He is probably prompted by the same philanthropic impulses when he attempts to inform physicians and the public of the 'miraculous results' of the serum that made Friedmann famous as well as rich" (*Jour. A. M. A.*, April 18, 1914, p. 1274).

FRIEDMANN AND THE NEWSPAPERS.—The officers of the Society of German Sanatorium Physicians protest against New York newspaper accounts which made it appear that their society had feasted Friedmann and endorsed his cure. Those who, incidental to a meeting of the society, inspected the Friedmann Institute were of the opinion that the cases under observation had been badly observed and as a whole could not be considered as successes or cures (*Jour. A. M. A.*, April 18, 1914, p. 1273).

PEARL LA SAGE COMPLEXION TREATMENT.—Pearl La Sage, Chicago, sells a beauty treatment by mail which is claimed "heals, soothes, cleanses, softens and beautifies the skin" and removes all kinds of blemishes. The treatment consists of tablets, capsules and laxative pills. The contents of the capsules and the tablets are to be dissolved in water and splashed on the face, one at night and the other in the morning. Examination in the A. M. A. Chemical Laboratory showed the capsules and the tablets to contain as essential constituents, phenolphthalein, borax and sodium carbonate. The pills appeared to contain cascara or some other similar drug and a little alkaloid, probably strychnin (*Jour. A. M. A.*, April 25, 1914, p. 1345).

THE HYPOPHOSPHITE FALLACY.—The hypophosphites were introduced by Dr. Churchill as a specific

remedy for consumption on the theory, since proven incorrect, that phthisis was due to a lack of oxygen in the tissues. On the supposition that hypophosphites were oxidized in the body, he presumed them to be a source of energy for the nervous system. Not only does the evidence indicate that in consumption there is an increase of oxidation, but there is no evidence that phosphorus acts as an energizer of oxidation, and, further, there is no proof that the hypophosphites enter into general metabolism. Not only is there no evidence of the utility of hypophosphites, but it has long ago been demonstrated that they are excreted unchanged. While the discredited hypophosphate theory is no longer contained in text-books, the fallacy is kept alive by proprietary interests, and physicians who depend for their therapeutics on the "literature" of proprietary concerns still employ the hypophosphites (*Jour. A. M. A.*, April 25, 1914, p. 1346).

DUKET'S CONSUMPTION CURE.—The backers of the Chicago exploitation of the Duket consumption "cure" now admit that the treatment is without merit, that it is vastly inferior to approved systems of treatment of pulmonary tuberculosis and that the treatment may lead to albuminuria. While the "cure" was given wide publicity through the newspapers, the public has not been informed of the unfavorable findings (*Jour. A. M. A.*, April 25, 1914, p. 1347).

RADIO-ACTIVE WATERS.—Waters whose radio-activity is due, not to radium itself, but to radium emanations will quickly lose their activity. As most radio-active waters owe their activity to radium emanations, they must be used at the springs (*Jour. A. M. A.*, April 25, 1914, p. 1348).

BOOK REVIEW

SURGICAL EXPERIENCES IN SOUTH AFRICA 1899-1900.

Being mainly a clerical study of the nature and effects of injuries produced by bullets of small caliber. By George Henry Makins, C.B., F.R., C.S., Senior Surgeon to St. Thomas' Hospital, London, etc. Second edition. New York: Oxford University Press, American branch, 1913. Price, \$3.75.

When the first edition of this interesting and practical recital of the experiences of the author in the Boer war appeared, it furnished much useful information concerning the immediate treatment of wounds of the soft parts and bones produced by small caliber bullets. Now the author presents in the second edition the subsequent history of many of the cases reported in the first edition thus adding immensely to the interest and value of the reports.

The volume does not lend itself readily to analysis. It contains a wealth of useful information besides detailed accounts of gunshot wounds. Chapters on general military hygiene, the transport of the wounded by prepared or extemporaneous conveyances, the surgical armamentarium which was found serviceable are all concisely described and well illustrated.

The volume is well written, concise and instructive. We do not know of any work on military subjects since that of Larrey on which is stamped the individuality of the author so forcefully.

The large number of members of the Medical Reserve Corps in this country as well as the surgeons in civil practice will find it a source of great and varied information on the subjects of which it treats. The publishers have presented the book in splendid form.

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E. J. GOODWIN, M.D.,
EDITOR

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } S. P. CHILD, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE FEEDING OF THE SICK INFANT*

FRANK C. NEFF, M.D.
KANSAS CITY, MO.

The consideration of such a broad subject would take more time than is here allowed, so I will limit myself to the feeding in certain diseases of infancy. Infants suffering from nutritional and intestinal disorders furnish the majority of sick cases in which the feeding has been taken into particular consideration. Little attention has been paid to the food and the calorie needs of the infant sick with extra-alimentary diseases.

In sickness as in health there are few exceptions to the rule that breast-milk is the best food; in fact, one comes more and more to regard normal breast-milk as a therapeutic agent¹ as well as food.² However, one must supply the next best food when for any reason human milk cannot be utilized.

The present tendency is to prevent food injuries by the maintenance of proper breast-feeding and where that is impossible by the intelligent supervision of artificial feeding. Fortunately for infants many of them thrive or endure on haphazard feeding, but unfortunately few of them survive ignorant prescribing when once a severe intestinal injury has been done.

The first general consideration in the selection of a food for a sick infant is to secure the maintenance or restoration of breast nursing. The physician cannot go far wrong in this one empiricism especially if the proper quantity be fed. Should, however, breast-milk be unavailable it is unnecessary in this day to say that he will select a pure well-balanced cow's milk.

INDIGESTION IN THE BREAST FED

The experience of the author is probably common to all pediatricists in that he is called in private practice to treat many breast infants showing symptoms of indigestion as evidenced by vomiting, colic, diarrhea or constipation, failure to sleep or to gain. Many of these had been previously robust and fat. They have probably been overfed, have thrived on it until signs of intolerance appear and a food injury begins to be manifested. One will find that there have been too short intervals, or that the infant has been nursing an unreasonable time, or taking it too fast. If after lengthening the interval and cutting down the time of nursing the symptoms still persist, an attempt should be made by weighing the infant before and after nursing to find out the maximum amount it can take short of producing disturbances. Should this amount not satisfy the normal caloric needs it may be possible soon to increase the tolerance for greater quantities. Three to four-hour intervals have come to be generally used by pediatricians and there is no longer doubt about the efficacy of such feeding.

When there persist dyspeptic stools, no gain in weight, the discomfort of the infant intolerable to all around it, one is face to face with one of the most vital questions in infant feeding; whether it is worth while to maintain breast feeding by attempting alterations in the composition of the milk. Analyses are disappointing and of little value if there be no way to influence the percentages in the breast milk. Does a wet nurse offer any relief for an infant of this kind? Sometimes a benefit results, but in my experience it is more common to find that such a child does not tolerate the wet nurse any better than the mother because we are dealing with an infant in whom serious injury has already been done or the child is a congenital digestive weakling. Friedjung³ has recently written of this in an excellent article

* Read at Eleventh District Medical Society meeting, Chillicothe, March 19, 1914.

1. Wieland: Cor. Bl. f. Schweiz. Aerzte, 1912, xlii, 149.

2. Variot et Morancé: Bull. Soc. de pédiat. de Paris xiv, 120.

3. Friedjung: Ztschr. f. Kinderh., Orig., vii, 1-2, 1913.

on the constitutional inferiority of the organs in certain breast-fed infants. It is well recognized that the mistake is made of taking the baby too hurriedly off the breast. If total breast feeding is impossible, an easily digested supplementary food can be substituted for part of the feedings. An examination of the stools will decide whether a fat-free food as whey or skimmed milk is needed or a small amount of sugar as is found in buttermilk or albumin milk.

THE CONSTIPATION OF INFANCY

One should regard constipation as an evidence usually of an intestinal indigestion. The constipated new-born baby fed entirely on the breast is with difficulty relieved through the diet. Correction of the mother's diet, digestion and mode of living may be tried, but often meets with little effect on the child. I have never attempted to administer fruit juices to infants less than 3 months old, but older infants will often tolerate from teaspoonful to tablespoonful quantities of orange, grape, pineapple or prune juice with good results. Supplemental feedings of cow's milk with the addition of a malted gruel such as the so-called malt soup, show a beneficial effect on the gray, dry, soapy stools.⁴ The effect of malt sugar is laxative, and of more benefit than any of the laxative drugs. The stools become brown, smooth and soft. I have administered malt extract in teaspoonful doses with one or more feedings to the breast fed. In bottle infants a change in the formula to a more digestible mixture is always to be considered. One should remember that a baby's failure to have a stool without assistance is sometimes no fault of the diet, but is purely a defect in the mechanism of defecation. The use of a suppository or the nursery chair at a regular hour each day may be all that is needed. Such infants may have perfectly digested stools.

ALIMENTARY AND NUTRITIONAL DISTURBANCES

One can consider the feeding of these infants in no better way than by following briefly the classification of Finkelstein.

1. The feeding of infants suffering from Disturbance of Balance. In spite of apparently correct feeding the child does not gain in weight even when the diet is increased. Only the fat content of breast milk will be tolerated in sufficient quantity. Breast milk is therefore the best treatment. With cow's milk feeding the fat must be reduced or eliminated and the food value built up by the addition of carbohydrates and protein. Malt soup mixtures are good in infants over 3 months, and can be varied in percentages, using as low fat, if necessary, as is

found in skim milk. Likewise the flour and malt can be greatly reduced from the formula of Keller, suiting the amount to the digestive ability and later to the actual needs of the particular child. Buttermilk can be built up if necessary by addition of flour, malt or cane sugar. One should not make the mistake of giving too large feedings until the tolerance increases. Such a child will often show a gain on an amount theoretically below its requirements.

2. Feeding of Infants Suffering from Dyspepsia. Following a disturbance in balance which is not corrected there is a decided intestinal disturbance with numerous watery, mucus stools, vomiting, and an elevated temperature. Fats, sugars and flour must here be reduced, and in severe cases also the whey contents of the food. Breast milk is preferable to any artificial feeding. Next comes Finkelstein's albumin milk, a description of which is not necessary here.⁵ Finally skim or buttermilk in case the other foods are not obtainable. These should be given in small quantities at first.

3. Alimentary Intoxication. The feeding of infants suffering from the systemic poisoning resulting from improperly digested and assimilated food and also from infections must provide for elimination through the kidneys and stools. Severe cases of this kind have long been known under the name of cholera infantum. The hunger diet with complete absence of sugar is necessary for twenty-four to forty-eight hours. This can be attained by feeding plenty of water, tea and vegetable soup, until the temperature is normal and the stools are no longer offensive. Then breast milk is to be chosen if obtainable, beginning with small amounts, a teaspoonful ten times the first day increasing an ounce a day until a sustaining diet is reached. Skimmed milk, buttermilk or albumin milk can be given as a second choice, and in the case of older infants with the addition of a dextrinized flour.

Marfan's⁶ treatment of cholera infantum is interesting as representing the French school, and is a valuable method of feeding without milk. On the first day water or tea diet, for not longer than forty-eight hours; then in infants under 4 months of age he uses exclusively a vegetable bouillon which is made as follows: One-half litre water, one potato, one carrot, one turnip, one-half teaspoonful salt, cook for three or four hours, add water to make 800 gm. With infants over 4 months old he gives a thin, slightly

5. For a complete description of albumin milk and its use in nutritional disorders as classified by Finkelstein the reader is referred to Finkelstein's numerous writings in German and to the very complete and excellent description by Julius H. Hess, Chicago: Amer. Jour. Dis. Child., ii, 6, p. 422, December, 1911.

6. Marfan quoted by Hamaide and Nigay: Le régime dans l'entérite aigue chez le nourrisson, Jour. de Méd. de Paris 33, 15-17, 1913.

4. Birk: Deutsch. Med. Wchnschr., xxxix, 27, July 3, 1913.

salted rice water. After four or five days he begins with buttermilk with increasing strength until he gives pure buttermilk, gradually changing to ordinary milk.

4. The feeding of cases of Alimentary Decomposition. This condition coming from the previously mentioned disturbances, with an intolerance of the fat in the food is synonymous with the condition commonly known in this country as marasmus or atrophy, and is best treated by graded doses of a not-too-rich breast milk. In this condition it is dangerous to have any preliminary starvation period. I saw one severe case of atrophy lose 1 pound of weight in twenty-four hours while food was being withheld. As advocated by Finkelstein, expressed breast milk daily in the quantity of 6 to 9 ounces in the light cases, half as much in the cases moderately affected, and only 2 to 3 ounces daily in the worst cases increasing slowly as the child improves. I have frequently been able to skim breast milk after it has stood for some time on the ice or it can be centrifuged. Severe cases have been saved by this form of feeding with a fat-poor breast milk, making up the required amount of nourishment as the child improves by using whole breast milk, or buttermilk, skim milk or albumin milk.

Czerny's⁷ classification of children who become the victims of marasmus is useful in outlining the feeding. First, in those cases that have inherited the exudative diathesis there should be a change from high fat to low fat and a high carbohydrate. Second, those cases coming from neuropathic and psychopathic parentage are fed with difficulty because of the nervous irritability of the stomach and intestines. Even the amount of sugar found in the breast milk or in the milk used in the artificial feeding causes diarrhea, and because of the large amount of fluid given vomiting is frequent and severe. The ideal treatment in these cases is to take away the fluids and put the baby on a soft diet, with its smaller volume. Third, the cases with hydroptic constitution, children who retain large quantities of water in their tissues. The diet in these cases is one which is rich in salt and sugar. Thus Czerny voices the general opinion of the profession that in marasmus the fat component of the food must be restricted, and replaced by the sugar.

At the 1912 meeting of the American Medical Association at Atlantic City, Section on Diseases of Children, the author⁸ reported a series of infants fed on a quite high protein milk which is of benefit in selected cases. Instead of

using half buttermilk and half water as suggested by Finkelstein, the author used entire buttermilk for his dilution of curds. Varying percentages of fat were used, depending on whether whole milk or partly skimmed milk were taken for precipitation by the pepsin. The two objections which have been raised so frequently to the use of Finkelstein's albumin milk can be overcome in most cases. First, regarding the percentages. These can be varied to suit the needs of the individual child, and no doubt such should be done at times, especially by reducing the amount of fat, and increasing the amount of carbohydrate. Second, as regards the cost and difficulty in making it. Any intelligent woman who is willing to give the time necessary can prepare satisfactory albumin milk. The cost is no more than that of prescription milk. However, I have seen so many cases of atrophy get well with simpler feeding that in private practice I try first, breast milk; second, breast milk with buttermilk; third, buttermilk alone or with flour-malt additions.

GASTRO-INTESTINAL DISTURBANCES DUE TO INFECTIONS

Acute diarrhea, summer complaint, ileocolitis and dysentery are closely allied terms showing inflammatory alterations in the intestinal walls as evidenced by pus and blood in the stools, and by rise in temperature. Overfeeding, improper and dirty food must be stopped at the earliest moment. There must be plenty of water given by the mouth, rectum or beneath the skin. If the dysentery is due to the gas bacillus the feeding should contain high protein and low sugar as the gas bacillus grows best on a food rich in sugar. Lactic acid milk either as buttermilk or albumin milk is the food of choice because of the inhibiting action which the lactic acid bacillus has on the gas bacillus. Infants suffering with infection by the dysentery bacillus (Flexner), streptococcus and coli bacillus are fed on a solution of sugar by Kendal,⁹ his theory being that an easily assimilable and readily fermentable carbohydrate changes the character of the bacteria in the canal from the proteolytic to the fermentative type, as well as furnishes nourishment. He feeds lactose 5 per cent. solution by the mouth for several days until symptoms subside. He advises the use of a venous infusion of a 2½ per cent. solution of dextrose in normal salt solution in order that the dextrose content of the blood may be brought up to the normal.

Grulee¹⁰ advises the use of skimmed milk curds suspended in gelatin water. His object

7. Czerny: Atrophy of infants, *Amer. Jour. Dis. Child.*, iii, 3, 1912.

8. Neff: A series of infants fed on high percentage albumin milk, *Jour. Med. Assn.*

9. Kendal: Bacillary Dysentery, *Bost. Med. and Surg. Jour.*, March 2, 1913, clxiv, 9, p. 289.

10. Grulee: *Interstate Med. Jour.*, 1913, xx, 1.

being to reduce the sugar and fat content of the food to the minimum which lessens the irritation to the intestines. He thinks of all food-stuffs that protein is the least irritating and the easiest of absorption and that infants with ileocolitis should have a properly-dosed protein.

It seems to me that next to breast milk albumin milk answers the requirements in the feeding of most cases of ileo-colitis. If as Kendal and Smith¹¹ believe the above-mentioned types of bacteria are causative of the various forms of ileo-colitis and are influenced by the nature of the food which is administered, albumin milk without sugar addition is indicated in the gas bacillus type and with sugar and flour addition when the Flexner bacillus abounds.

FEEDING OF THE PREMATURE INFANT

More nourishment per pound of weight is required than for the full-term child, but we at once meet the difficulty of feeding such a quantity because of the defective digestive powers. Over-feeding quickly shows its results. If the infant can tolerate breast milk equal to one-fourth of its body-weight during the first ten days of life and one-fifth of its body-weight thereafter as Budin advises it should have that quantity. Failure on the part of the child to take this amount must often be met by forced feeding with a medicine dropper, spoon or esophageal catheter.

Breast milk is almost a necessity for feeding premature infants, but when intestinal disturbances are present it is wise to use definite amounts of it so as to avoid over or underfeeding. The milk may be diluted in order to make the digestion of it simpler, and to make up the quantity of fluid which the child should have. By the time the baby is 2 weeks old it may be taking as many as 140 calories per kilogram, or 56 per pound of the child's weight.

Czerny and Keller¹² allow the premature infant no more than six feedings daily (every four hours) of mother's milk and no more than five feedings of artificial food. They believe that all the reasons for long interval feeding apply even more with the premature.

Litzenberg¹³ reported fifteen cases of prematurity in the feeding of which long intervals of three to five hours were employed. The first case he reported was a baby weighing less than two kilograms, not thriving on one and one-half or two-hour nursings, having vomiting, attacks of cyanosis and rapid loss of weight. The baby

was then fed at four-hour intervals all it could take.

Rott¹⁴ in a recent paper reports good results from the use of feeding through a stomach tube in premature infants that are weak or sick and who will not nurse.

I have seen several premature babies made to gain in weight when taking no more than three or four nursings a day. It has sometimes been impossible in case of failure in maternal nursing to get more than three or four feedings a day from a wet nurse. In case such an infant can take a sufficient quantity at each nursing it may thrive nicely, in other cases supplemental feedings of whey will be found the next best thing.

SCORBUTUS

Little need be said regarding the artificial feeding of infants suffering from scurvy. When once a diagnosis is made, no illness of childhood offers such promptness in the way of cure, and by the feeding alone. Certain it is that one sees scurvy develop occasionally during malt soup nourishing, condensed milk, and other foods. Whether or not the heating of the milk is causative, raw milk feeding and the administration of fresh fruit juices are sufficient for a cure.

RICKETS

The great prevalence of this disease as is seen in Germany, in America among the negroes and Italians, often in breast-fed infants makes one come to the belief that something besides the feeding is responsible for its development. However, the disease appears at that period of infancy when meddlesome mixed feeding occurs. Just how many cases would develop among the strictly breast fed is difficult to say. In the treatment of rickets in the breast-fed, overfeeding whether of mother's milk or of additional food must be stopped. In the artificially fed a simply modified fresh cow's milk with no more fat than the child can tolerate well should be given. Fat in the form of cod liver oil or olive oil is then curative. Malt-extract, the juice from fresh fruits, from vegetables and from meats given in small quantities once a day are of value.

SPASMOPHILIA

Zybell¹⁵ found that no special diet had any uniform effect on convulsive tendencies in children.

Thorspecken¹⁶ on the other hand, gives great importance to the diet and believes that cow's milk is especially injurious. There should be a

11. Kendal and Smith: *Bost. Med. and Surg. Jour.*, March 2, 1913.

12. Czerny and Keller: *Ernährung des Gesunden Kindes*, p. 685.

13. Litzenberg: *Section of Dis. Child.*, A. M. A., 1912, Atlantic City.

14. Rott: *Zur Ernährungstechnik frühgeborener Säuglinge*, *Ztschr. f. Kinderheilk.*, 1912, v. s. 134.

15. Zybell: *Jahr. f. Kinderh.*, 1913, lxxviii.

16. Thorspecken: *Die Krämpfe der kleinen Kinder.*, *Med. Klinik*, June 29, 1913, ix, 26.

change to tea or breast milk or in older infants dropping milk entirely for a week.

Grulee,¹⁷ experimenting with animals concludes that the removal of whey from food removes those constituents which tend to increase electrical irritability, and therefore the convulsive tendency. Food containing whey is distinctly irritating to infants with a convulsive tendency.

Nourishment free of cow's milk can be secured with breast milk, mealsoup (malt extract and flour), broth soup with rice, vegetables, meat juice and potato broth.

SPASM OF THE PYLORUS

The feeding of infants with pylorospasm has as yet shown little advance. Lapage¹⁸ advises regulating the feeding, using easily digested food that leaves no residue and has the greatest chance of passing the pylorus. He states that it is advisable to give small amounts, even as little as a teaspoonful frequently until the child improves and vomiting ceases. Sometimes a change of food alone will lead to temporary improvement. Feeding through a tube without much dilution of the food is advisable, after washing the stomach. Nutritive enemata are of doubtful value.

Hess¹⁹ of New York, and Putzig²⁰ abroad, have recently described the feeding of these cases by the use of a duodenal catheter. Putzig recommends the use of four or five ounces of expressed human milk with the addition of a small amount of Plasmon. The child is fed exclusively by the tube at first but later once or twice daily.

Food which is high in fat, according to Cowie,²¹ tends to slow stomach evacuation. He would recommend the use of high milk protein combined in such a way as to prevent the formation of large curds in the stomach.

Morse²² states that the best food is good breast milk which can be skimmed and lime water added if vomiting persists. As artificial feeding he advises fat-free cow's milk and the whey proteins which is not coagulated by rennet and can easily pass the pylorus. As to the interval of feeding he advises determining how long it takes the stomach to empty itself in each case and make the intervals somewhat longer than this. Small feedings are probably better.

When true pyloric hypertrophy exists, the outcome of the feeding is not so hopeful as in pure pylorospasm unless it be supplemented by timely operation.

INFANTILE ECZEMA

Finkelstein's²³ belief is that restricted diet in the eczema of infancy does not help, but is actually harmful. He reported two cases with bad results on limited diet and improvement on a more generous diet.

Towle and Talbot²⁴ conclude that the digestive disturbances in eczematous infants is not the primary cause of the skin manifestations. There are types of indigestion of fats or sugars accompanied by eczema or a more evident form in which the stools show undigested particles of hard foodstuffs. The indigestion of fats and sugars as shown in the stool examination is the only one which seems to be associated regularly and definitely with eczema, which is the acute exudative type and must bear some relation. These authors think that indigestion occupies only an intermediate place, if any, in the production of eczema.

Those who have treated the eczema of infants know that only with the proper regulation of the diet can most cases be cured. Whatever beneficial local treatment shows is found associated with the change in diet. Some cases persist in spite of everything. The eczema of the breast infant confronts us with the question of whether it is necessary to wean the child. Occasionally the control of the amount which the baby receives and the alteration of the milk by improved conditions of the mother show results. Slight degrees of eczema do not call for weaning, but the discomfort and loss of sleep resultant from severe cases which will not respond to the regulation of the diet or to local treatment make weaning imperative.

Some artificially-fed infants will be benefited by regulating the quantity and percentage, giving low sugars and low fats but there are others whose skin reacts to even the lowest amount of these elements so that it becomes necessary to take such an infant off of milk for as long a period as possible. In such cases the various vegetable broth diets are of service, likewise zwieback, mixed vegetables cooked and finely mashed, etc., but it is difficult to make a young infant endure on a milk-free diet. However, the author has come to a conclusion that in certain cases the eczematous infant must be taken entirely off milk.

Rialto Building.

17. Grulee: *Dietetic Treatment of Convulsions in Infants*, Jour. Dis. Child., A. M. A., March, 1913.

18. Lapage: *Practitioner*, March, 1912, lxxxviii, 3, No. 525.

19. Hess: *Amer. Jour. Dis. Child.*, March, 1912, iii, 3.

20. Putzig: *Ein Beitrag zur Behandlung des pylorospasmus*, Therap. Monatsh., 1913, xxvii, 25.

21. Cowie: The significance of pyloric reflex in true and pseudopyloric stenosis in infants, *Am. Jour. Dis. Child.*, March, 1913, v, 3, 225.

22. Morse: *Spasm of the Pylorus in Infancy*, *Am. Jour. Dis. Child.*, May, 1911, i, 5, 366.

23. Finkelstein: *Dietetic Treatment of Eczema in Children*, *Ztschr. f. Kinderh.*, 1913, viii, 1.

24. Towle and Talbot: *Infantile Eczema and Indigestion*, *Amer. Jour. Dis. Child.*, 1912, iv, 219.

THE NEUROLOGICAL MANIFESTATIONS OF PERNICIOUS ANEMIA

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Structural changes found in the central nervous system, and especially in the spinal cord, of persons suffering from pernicious anemia, have not infrequently been reported. By some writers it has been assumed that such changes in the spinal axis probably exist in all cases of pernicious anemia, though they may not be recognized always clinically. These pathological alterations, which are of a degenerative character, are met with in varying degrees of intensity and from the clinico-pathological point of view, have been divided into three main groups. Firstly, we meet with those cases of pernicious anemia wherein during life there are exhibited no signs or symptoms of nervous system involvement, but where the autopsy reveals pathological changes in certain columns of the spinal cord. Secondly, there is that group of cases of pernicious anemia during the course of which vague, or more or less marked, symptoms are manifested which are to be looked on as dependent on a disease involving one or more system tracts of the spinal cord. In this group the neurological symptoms seem to be of an accessory or adventitious character and at most are relegated to a position of secondary importance. And lastly, there is the third group of cases which by some have been regarded as constituting a distinct disease type which has been termed subacute combined degeneration of the spinal cord.

It is, of course, obvious that any such grouping cannot be followed inexorably in each individual case. It must be remembered that any division of a disease into specific types or classes must be to a great extent arbitrary and, therefore, necessarily, subject to variations. Especially is this true where the division is based on changes of an inaccurately determinable quantitative nature such as the extent of progression of the symptoms. Also, types which are erected on pathological changes predicated from clinical symptoms are often quite likely to be found to have been inaccurate when the post-mortem findings are available for check. Because of the unfavorable prognosis in the essential anemias, it may be questioned whether such a classification is of any utility. Perhaps it does not aid the patient with the pernicious anemia but nevertheless it is of definite value to be able to recognize the character of these neurological symptoms to prevent confusion with other varieties of spinal cord disease dependent on different causative factors and in which the prognosis and treatment are widely different. Therefore, this tripartite clinico-pathological

grouping is of clinical value, as well as of considerable medical interest.

As to the etiological relationship which the pathological lesions and the clinical symptoms bear one to the other, there have been expressed several apparently divergent opinions. In the first cases reported the condition was confused with *tabes dorsalis*. It was therefore concluded that the anemia was a disorder secondary to the tabetic changes and quite directly dependent on them. Lichtheim first gave expression to the opinion that in cases of this type, one had not to deal with true *tabes* but rather with *tabes-like* degenerations in the spinal cord of which the anemia was the primary cause. Later it was proposed that both the anemia and the changes in the nervous system were due to the action of the same unknown toxin. This attitude toward the nature of the causation of the condition is the commonly accepted one to-day. In favor of this view, it may be stated that similar cord changes have been noted in many different chronic toxic, cachectic or anemic conditions. Pernicious anemia alone is not necessary, but a severe deuteropathic anemia or a toxic process of sufficient intensity and duration may produce similar changes in the nervous system. Bonhoeffer believes in certain mental disorders of the type of the exhaustion psychoses where the abnormal mental states occur in connection with anemia, that these are not due directly to the exogenous toxin itself, but rather are secondary to those changes which are produced in the brain by the toxin and he, therefore, looks on these mental disturbances as reaction types of symptomatic psychoses.

It may be that either the anemia or the nervous symptoms are the first recognized evidences of disease and for this reason it is that in some instances the patient, on entering the clinic, may be sent to the neurological service or in others to the medical service. Clinically, it is quite impossible to correlate with any degree of accuracy, the extent of the degenerative changes in the nervous system and the degree of the anemia. Remissions in the progress of the anemia may occur without corresponding betterment of the spinal symptoms or cessation of the degenerative nervous process.

Aside from the anemia itself, the symptoms which may be observed as a result of the involvement of the nervous system are numerous and variable. Such might readily be expected from the variable site of the lesions themselves, there being no location in the cerebrospinal axis where they may not be found. The signs of a combined sclerosis and degeneration of the posterior and lateral columns of the spinal cord have come to be well recognized changes which may occur in connection with pernicious anemia. Cases have been described wherein the differentiation from a true *tabes dorsalis* has been

most difficult and uncertain. In those less frequent instances, where the disease has invaded the brain, symptom complexes imitating other well known diseases have been set up. Thus, cases have been described which simulated general paresis, certain confusional states similar to the epileptic *Dammerzustand*, deliria and Korsakow's syndrome.

The symptoms may be classified as physical and psychical, either of these being present in a series of cases in varying intensity. Of the former, it is necessary in this connection to say little more than that the symptomatology of pernicious anemia may precede the nervous symptoms for several months, or become more pronounced at a later date. From the neurological side the symptoms are usually first noted as a numbness in the legs and arms with some hypesthesia. Sometimes there is a girdle sensation and when this symptom occurs in connection with ataxia, lost knee jerks and other indications of a posterior column involvement, the tabetic clinical symptom complex is closely approximated. General weakness with practically no muscular atrophy and without electrical changes in the muscles, comes on gradually. A monoplegia or paraplegia may develop and either may be preceded by a spastic condition. These nervous symptoms or signs may be subject to marked remissions, not necessarily concomitantly, with changes in the anemic state and a definite monoplegia may clear up entirely. In mixed or complex lesions of the cord tracts, such as we have to deal with in these cases, there are diametrically opposite tendencies at work and the clinical manifestations will therefore depend on whether the lesser or greater intensity of the morbid process is active in the centripetal or in the motor tracts.

When we come to consider the psychic symptoms we find, as naturally might be expected, that we do not have any clear cut disease type, but rather have to differentiate between different degrees of mental disturbance which may extend from a slight inhibition to a complete loss of psychic activity. The psychoses which may accompany pernicious anemia are well characterized as symptomatic and should be looked upon as the cerebrospinal reaction of the individual to the toxic agent, in a manner similar to that in which delirium is related to fever. In general, we may expect to find a certain degree of irritability with more or less indifference and apathy. More evident disturbances may become manifest in delirious or confusional states, exaltations followed by depressions passing into somnolence or stupor. Impairment of orientation and memory are not uncommon, and delusions of a persecutory type with fleeting visual and auditory hallucinations may occur. Hallucinations and delusions in some instances,

here, as in other psychoses, are obviously developed in explanation, or on the basis of the sensory disturbances.

The anatomical basis for the nervous symptoms varies, but fundamentally we have most frequently to deal with a combined sclerosis of the posterior and lateral columns. Wickern has reported a case of cortical blindness with changes in the cuneus and Schraeder has reported the finding of minute focal lesions in the cortex in cases of severe anemias. Schraeder, however, believes that these cortical lesions are of a different character and bear no relation to the cord lesions described in connection with true pernicious anemia. In the cord the degeneration commonly starts in the upper dorsal or lower cervical regions, the posterior columns being the earliest and most intensely involved. Occasionally, the lumbar cord is most attacked. Occasionally, only the posterior columns are involved, and here, as has been mentioned, we more frequently meet with the tabetic syndrome clinically. There is, however, but little tendency toward implication of the gray matter of the cord or the nerve roots, and also, there is but little contraction or shrinking of the cord as in *veridical tabes*. The lateral columns are never involved alone, but sooner or later in the process become attacked and in some cases even the anterior horns may also show clinical and microscopical signs of invasion by the disease process.

As to the explanation of these pathological changes, the frequency with which small hemorrhages have been encountered has given rise to the idea that all may be explained by assuming a coalition of these small foci, a myelitis of endogenous origin dependent on an involvement of the ganglion cells, thickening of the vessel wall and resulting defective cord nutrition. The cells of the gray matter may show degenerative changes and become pigmented. Most noticeable, however, is the neuroglial proliferation and the rarefaction of the nerve fibres with resulting cavity formation in the cord. It is more probable that we have to do with degenerative vacuolization of the nerve cells succeeded by a replacement gliosis. This explanation seems best to account for the irregular, imperfectly systemic and incomplete character of the lesion to be observed.

As has been stated, changes in the nervous system, in connection with pernicious anemia, are by no means uncommon. On the other hand, the symptoms which may be exhibited, and particularly those indicative of a disturbance in the mental sphere, are so variable that the following case is of interest. Moreover, the combination of the pathological cord changes referable to the anemia with organic vascular alterations in the brain offers points of additional interest when the explanation of the symptomatology is taken under consideration.

The patient, a white male, 55 years of age, was first seen on June 15, 1911. Other than that one paternal second cousin was "childish" and died of unknown cause at the age of 45, there was no obtainable family history of nervous or mental disease, epilepsy or tuberculosis. Birth and early life were uneventful. No history of trauma or convulsions in childhood. Had some of the usual childhood diseases but was never seriously ill. When about 30 he studied at a veterinary school and since then has made his living by this practice, for the past ten years having been engaged in the capacity of meat inspector. There was no history of prior disease, injury, venereal infection, alcoholism or other drug addiction.

The date cannot be set definitely with certainty when the first symptoms made their appearance. Also no definite cause was ascertainable, although the patient himself believed that working in refrigerators a great part of the time had a great deal to do with his ill health. For several years prior to the appearance of recognized mental abnormalities, his wife stated that he was "very nervous and restless, especially at night." For about a year past these symptoms had been more evident; also for some years past he had been subject to attacks of "indigestion" on several occasions of sufficient intensity to require the services of a physician. The last attack occurred in January, 1911, and was particularly severe. He was told, subsequently, by his physicians that he had returned to his work before entirely convalescent from this attack and thus his present trouble was occasioned.

The onset of the present illness, or at least the onset of a definite exacerbation of the same, occurred in February, 1911, some four months before he first came under the observation of the writer. At that time and for several succeeding days he complained of loss of appetite, weakness, dullness in the head, a "creepy" sensation which he could not localize in any especial part of the body and a general, very uncomfortable feeling which he characterized as "down and out." Although he said he did not have fever, "it seemed that some influence was going through him—a sensation of hot weather," although it was not warm at that season. Considerable improvement occurred and he again returned to work. In March, 1911, he took the prophylactic antityphoid inoculations with a resulting mild reaction not causing an interruption of his duties. A short time after this mental symptom again became prominent, motor and mental unrest, possible auditory and tactile hallucinations and mild persecutory delusions. So far as is known his condition continued practically unchanged, but variable, up until June 15, 1911.

Examination.—When seen for the first time patient was in bed, the eyes were closed and during the visit he remained mute. The head was rotated slowly from side to side, arms and legs were moved about constantly in a rather aimless, purposeless manner. Occasionally the arm was used as though to shield the eyes from a bright light. These movements, which involved the fingers, were not of a characteristic athetoid or choreic character. At first he refused to obey any directions and when his hands were held he mildly resisted such restraint. Many attempts were made to open the eyes but this he would not permit until asked to protrude his tongue, when instead, he opened both eyes and smiled in quite a normal manner. The lips were dry, the teeth covered with sordes, the temperature slightly subnormal. The pupils reacted to direct light. Because of unsatisfactory cooperation further examination was postponed. The picture outwardly was one of confusion with a marked hysteriform coloring.

Physical Examination.—Height, 5 feet 6½ inches; weight, 120 pounds. (Usual weight, 150 to 160

pounds.) Skin rather sallow. General physical condition fair. Heart showed a clear first sound; no increase in size; no murmurs. Pulse, 70; regular but weak. Slight peripheral arteriosclerosis. Respiratory and genito-urinary tracts normal. No objective disturbances of the gastro-intestinal tract. Complained of indigestion and constipation. No muscular hypertrophies or atrophies. No limitations or paralysis; no tremors. Gait, station and coordination showed no abnormalities. No cranial nerve involvements. Patellar, plantar, cremasteric and abdominal reflexes normal. Pupils were equal, regular and round in outline and reacted to light directly and consensually and normally to accommodation. No areas of anesthesia or hyperesthesia. Appreciated light touches and localized pin pricks well. Complained of numbness and tingling sensations in the feet and hands which he spoke of as "electricity." No disturbances of deep sensibility. Wassermann reaction, with the blood serum, was negative. The urine analysis showed a trace of albumin, a few hyalin and epithelial casts, a few leukocytes and epithelial cells.

Mental Examination.—No disturbances of memory or orientation; no intelligence defect demonstrable. No affective disturbance to be noted—frequently becomes excited and agitated (patient's statement). Auditory hallucinations were present—he sometimes heard shouting voices, the words being such as to indicate that persons were on guard, the content seemingly according with the nature of that duty. Delusions of an allopsychic character and developed on the basis of paresthesias were elicited—electricity being used upon him, the currents coming up through the bed and passing through his body. He believed this electricity was being used by the doctor, but for what purpose he did not know.

During July the condition, though somewhat variable, showed no essential change. Occasional periods of transiently increased weakness occurred but in general there was a tendency toward increasing strength. At times there were periods during which he appeared somewhat dazed and confused, and then would admit that this was more evident in the afternoon than in the morning—that he seemed to grow tired toward the end of the day. Paresthesias continued and he attributed these to the electricity which he believed was employed by his physician for therapeutic object.

During August there was a noticeable improvement in his general physical health as well as in his mental state. Headaches in the morning, together with general malaise, were a frequent complaint. Hallucinations continued to be present, but received a more rational explanation, as did also the delusions, although insight was decidedly impaired.

September 29: Gastro-intestinal disturbance associated with vomiting, rise of temperature and generalized extreme weakness.

October 3: Extreme weakness and especially some motor impairment of the left lower extremity. Impairment of facial muscles, slight facial asymmetry and marked dysarthria. Skin and mucous membranes pale; slight lemon yellow tinge of the skin. Mental condition unchanged.

October 7: Red blood-cells, 1,500,000; hemoglobin, 55 per cent. Nucleated reds and myelocytes present.

October 11: Red blood-cells, 1,400,000; leukocytes, 12,000.

October 16: Examination of feces showed no parasites or abnormal constituents. Examination of vomitus showed a large amount of fat, no blood, some mucus and a few large squamous epithelial cells. General condition has shown no change.

November 10: Red blood-cells, 1,180,000; hemoglobin (Sahli), 47 per cent.; leukocytes, 7,700. Fresh smears show poikilocytosis, many macro- and micro-

cytes, and some normoblasts. Differential leukocyte count showed:

Polymorphonuclears	58
Large lymphocytes	11
Small lymphocytes	22
Large mononuclears	3
Transitinals	2
Eosinophils	1
Basophils	0
Unclassified	3

November 12: Red blood-cells, 1,304,000; hemoglobin (Sahli), 51 per cent. Subjectively some improvement, still weak.

November 15: Wassermann with blood serum, negative.

November 18: Red blood-cells, 1,384,000; hemoglobin (Sahli), 50 per cent.; leukocytes, 5,200. Fresh smears and differential leukocyte count showed no essential alteration from that reported on November 10.

November 24: Slight improvement in physical and mental condition. Less frequent complaints of various unusual sensations in the extremities and the presence of paresthesias denied. Dizziness and faintness even while in reclining posture. Grip equal in two hands; knee jerks slightly exaggerated, more on left than on right; tendo achillis jerk active; no ankle clonus on either side. Cremasteric and abdominal reflexes active; plantar stimulation caused dorsal flexion of great toe on the left side (positive Babinski), plantar flexion on right; marked plantar defense reaction. Light touches (cotton) and pin pricks quickly recognized; perhaps some hyperesthesia of the entire cutaneous surface. Pupils are equal, regular, and round in outline, react to light directly and consensually and to accommodation normally. Slight facial asymmetry, nasolabial fold more prominent on right than on left; no speech disorder. Otherwise no cranial nerve involvement. No muscular incoordination. Spleen not enlarged.

December 26: Red blood-cells, 952,000; hemoglobin (Sahli), 44 per cent.

December 7: Ophthalmoscopic examination showed the veins somewhat engorged; arteries small and thread-like; disc was pale as was also the retina. No hemorrhages.

December 29: Progressive, gradual failure for the past few weeks. Death.

Autopsy.—The important changes found at post-mortem examination, besides those of pernicious anemia, were visceral and cerebral arteriosclerosis, thickening of the dura and opacity of the pia with a brain weight of 1,370 grams. There were no essential changes in the cerebrum or cerebellum, while in the spinal cord there was a sclerosis especially pronounced in the posterior columns.

The case illustrates a commonly acknowledged factor in the explanation of the comparative infrequency with which cases of pernicious anemia with concurrent neurological symptoms are reported. Psychiatrists are primarily interested in mental manifestations of disease. The rather widely dominant trend toward a belief in a purely psychical cause of mental disease has pushed concepts of psychophysical parallelism into the background to such an extent that physical causes, when they exist, are too often overlooked. The existence of the anemia in this patient was not discovered until late in the course of the disease. Although paresthesias were present early, other more definite signs of a neurological condition were not demonstrable until weeks after under observation.

The slow development of the mental symptoms, the variability of their intensity, the retention of personality, perfect orientation, good memory and fair insight, together with a fluctuating, somewhat unstable emotional state in a person in the sixth decade suggested the possibility of psychosis of an organic character dependent on vascular disease and the absence of focal symptoms led to the conclusion that we had to deal with a diffuse cerebral arteriosclerosis. The hallucinations and delusions were not in disaccord with such a diagnosis. Also, the paresthesias might be explained by such a process, although their unusual prominence and persistence should possibly have attracted greater attention. There were no symptoms indicative of a syphilitic disease and the negative Wassermann reaction also tended to dispel any such possibility. The transient periods of partial confusion with headaches, weakness and general malaise were all in favor of an arteriosclerosis process. And finally, early in October, the appearance of a mild partial hemiplegia seemed to be sufficient to confirm this diagnosis.

At this same time the anemic condition was suspected and confirmed by subsequent examinations. From this time on greater attention was paid to the sensory disorders, bearing in mind the possibility of a spinal cord lesion. A diagnosis of a degenerative lesion in the cord, and especially of the posterior columns, associated with pernicious anemia was made. However, it was not possible to locate the lesion accurately from a correlation of the clinical symptoms owing to the fact that we had also to consider a central lesion producing the centrifugal tract symptoms. It seems probable that we have to deal with dual etiological moments in this case. The logical conclusion that the mental symptoms were largely due to the cerebral arteriosclerotic changes while the neurological signs were indicative of a cord lesion dependent upon pernicious anemia, seems tenable. What relation these two factors bear to one another must remain more or less conjectural. The delusions and fallacious sensory perceptions are referable to the paresthesias in the first instance and illustrate the rôle played by somatic disorders in the production of such mental abnormalities.

The degree of cerebral arteriosclerosis was comparatively slight, whereas the anemic process had produced marked localized, as well as constitutional, disorders, such as we not infrequently observe in severe intoxications. One might be justified, therefore, in postulating an hypothetical toxin linked with a pernicious anemia which of itself had sufficed to provoke the mental abnormalities either directly, or, mediately, through its action upon an already diseased cerebral vascular system. From this point of view we must conclude that we had to deal with a symptomatic psychosis of which the pernicious anemia was the cause.

Humboldt Building.

BACTERIAL VACCINES AND THE THEORY OF THEIR USE*

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As early as 1880 scientists demonstrated that bacteria injected into the blood-stream of healthy animals were destroyed by some unknown specific action of the blood of the animal. In 1885 Fodor injected large quantities of the pathologic bacteria into the blood of animals and found that the blood was sterile in forty-eight to seventy hours. In 1887 he demonstrated that the blood of guinea-pigs was destructive to living bacteria. It was concluded that this was due to some specific toxin which was supposed to be present in the blood of the healthy animals. Metchnikoff and his co-workers after years of research advanced the theory that certain leukocytes (phagocytes) had the intrinsic action of taking up and destroying or digesting living pathogenic organisms. This they are enabled to do by the opsonins which in some way combine with the bacteria and prepare them for destruction by the phagocytes. Dr. Wright demonstrated that fact and first used the term "*opsonins*." He also discovered that these opsonins may be increased by injecting "bacterin" or bacterial vaccines. Thus an entirely new method of treating infectious diseases was introduced to the scientific world.

Bacterial vaccines are designed to antagonize bacterial infections. This may be accomplished in a prophylactic manner, as illustrated by the antityphoid inoculation, or therapeutically, as by the use of pyocyaneus vaccine in a case of pyocyaneus infection. Every healthy animal organism antagonizes pathogenic bacteria, but when the animal of itself does not possess the sufficient antitoxic power it becomes necessary to increase the so-called phagocytosis by artificial means. The factor which produces this active resistance against the destructive organism is known as immunity.

When the animal organism by its own power successfully destroys the infection we have spontaneous recovery. Under ordinary circumstances every living animal is constantly exposed to possible infection. Bacteria are present in the air we breathe, in our food and drink, on our skin and in our alimentary canals. It is obvious, therefore, that there is some potent natural means of resisting the attack of the organism and that only when the means of resisting the attack fail or are insufficient, infection takes place.

This resisting power is termed immunity, the exact opposite of susceptibility. Furthermore, the process of natural cure of any infectious dis-

ease is made possible by such a degree of immunity as may suffice to destroy the invader.

There are two varieties of immunity, the natural and the acquired. Natural immunity is that which is inherent in the constitution of the animal when born and not due to any event taking place in its life history. Thus the lower animal is immune to gonorrhea and the human is immune to the germ of chicken cholera.

The causes which lower the resistance or the immunity are of two kinds, general and local. Of the general causes exposure to cold, starvation, and malnutrition are the most important. Local causes, including injuries, contusions, and irritations due to chemic substances, lower the natural resistance.

Acquired immunity is of two kinds, active and passive. Acquired immunity results from a previous attack of a disease contracted naturally or due to artificial inoculation.

Syphilis and the exanthemata are good illustrations of diseases conferring an active immunity, although even these are not always absolute.

Passive immunity is that which is conferred on an animal without any effort on its part, namely, by the injection of a serum from an animal that has already acquired an active immunity against the disease in question. If some of the serum from a horse which has been actively immunized against tetanus is injected into another animal the latter will also become immune to the tetanus bacillus or to its toxins. Passive immunity cannot be bestowed by the injection of serum from an animal which is naturally immune. When the animal is immune it contains in its makeup protective substances commonly known as antibodies, which are present in the blood or in the tissue secretions. Among them we may include antitoxins, which act by neutralizing the bacterial poisons; bacterolysins, which destroy the bacteria; and opsonins which in some way prepare the bacteria for destruction by the phagocytes.

In contrast to these are antigens, which are substances that stimulate the production of antibodies.

Bacterial vaccines, living or dead, are antigens. Wright and Douglas employed the term opsonins to designate the elements in the blood-serum which prepare the bacteria for destruction by the phagocytes. By counting the bacteria contained in a certain number of leukocytes and dividing to obtain an average, the so-called phagocytic index was obtained. The phagocytic index of a patient divided by the average phagocytic index of a given number of normal persons, gives the opsonic index. The determination of this index requires time, skill, and a well equipped laboratory, and it is not considered necessary to success in this new department of therapeutics.

* Read before the Johnson County Medical Society, March 10, 1914.

Wright was first to determine the phases of reaction by means of the opsonic index. A short time after the inoculation is made the opsonic index falls lower than it was previous to the injection. This he designated as the negative phase. After an interval of two or three days the opsonic index rises above the starting point. This he called the positive phase. After this there comes a point of sustained high tide of immunity. Thus the injections are repeated from time to time and the positive phase gradually attains a higher level until it may be as high or higher than that of a normal animal or individual. In other words, if the vaccinations are properly given the patient's tissues are stimulated to an increased production of the opsonins, phagocytosis is increased, the invading bacteria are disposed of and the patient recovers from the infection.

Theoretically, the opsonic index is a valuable guide in determining the size and the frequency of the dose of the vaccine, but the process of estimating the index is so great, and so liable to error in the hands of the average practitioner that it is not practicable in our every day work, and not considered at all essential to success. It is our conviction, however, that in certain obstinate cases, in which the therapeutic vaccine injections have wholly or partially failed, study of the opsonins may furnish a most valuable clue to the cause of failure. In practice the clinical symptoms, such as rise of temperature, increased pulse-rate, amount of local pain, and the inflammatory reactions in the localized infections, and the patient's general condition, may be fully relied upon in determining the size and frequency of the dose.

My general rule has been to begin with the small dose and progressively increase, immunity being more effectively produced by the repeated injections of gradually increasing doses than by a single injection of a large dose. Should no improvement be noted, the size of the dose may be increased or the interval shortened, or both. If a pronounced clinical reaction occurs, characterized by general malaise and an aggravation of symptoms, it is evident that the dose has been too large.

As a general rule the interval between the doses in the more acute cases may be every twenty-four hours for three or four doses, and then every fourth day. In the subacute infections the rule I have followed is to make the injections every fourth day. In other words, try to avoid making any injection during the negative phase, when the opsonic is at low tide, but try to catch the high tide of the positive phase.

It is obviously impossible to discuss in detail the various complex steps of the subject of immunity. The physician who wishes to familiarize himself more fully with work along this

line may find exhaustive references in the German work of Wolff-Eisner, or Ricketts' "Infection, Immunity and Serum-Therapy." The work of Citron has recently been translated into the English language and is very concise and practical.

DEFINITION AND METHOD OF PREPARATION

Bacterial vaccines are suspensions of definite quantities of dead pathogenic bacteria in physiologic salt solution. Unless the best kind of culture-medium is used the vaccine will be worthless when the subsequent steps are performed. Bacteria are so sensitive to their environment that it is easy to attenuate a virulent strain by two or three transfers on unsuitable media. Usually the medium which gives the most prolific growths in the shortest time is the one which attenuates the culture the least. About 95 per cent. of all cultures for vaccines are grown on ascetic fluid, plain agar, or blood-agar.

Plain agar must be made from meat infusion from which the muscle sugar has been removed by inoculation with the colon bacillus. To this there are added 15 gm. of agar-agar, 10 gm. Wittes' peptone, 5 gm. sodium chlorid, 1 gm. glucose for each 1,000 c.c. of the finished product. This is titrated and adjusted so that it takes 1 c.c. of 0.1 normal NaOH to neutralize 10 c.c. of the agar. This is tubed in 20 c.c. test tubes with 10 c.c. for plating and part put with 5 c.c. for slants and then sterilized in an autoclave.

We use the glucose agar when we expect to find *Staphylococcus aureus* or *albus*, *Bacillus coli*, *Bacillus typhosus*, *Bacillus proteus*, *Bacillus pyocyaneus*; and blood-agar when we expect to find *streptococcus*, *meningococcus*, *gonococcus*, *micrococcus catarrhalis*, *micrococcus tetragenes*, *pneumococcus* and *Bacillus influenza*. Since the first group of organisms will also grow on blood-agar it is obvious that whenever we are in doubt we always use this medium.

When glucose agar is used the bacteria are isolated by making several dilutions and then plating.

When blood agar is used the plates must be made at the time the blood is drawn and subsequently inoculated by streaking the infected material over the surface by means of a bent glass rod or platinum wire. By both these methods isolated colonies are obtained, and pure cultures can be made by "fishing" out the different ones and making sub-cultures on the differential media necessary.

Pure cultures are essential because: (1) the organism must be identified in order that it be determined if it is pathogenic and also to know what temperature it will take to kill them. (2) Different kinds of bacteria have different rates

of growth on the same medium, and some organisms grow well together while others do not, so in mixed cultures we do not obtain the organism in the proper proportions. (3) Almost all cultures from surface lesions are contaminated with saprophytic bacteria which usually outgrow the pathogenicones and are of course useless for making a vaccine.

After pure cultures of the pathogenic organism or organisms are secured it is easy to prepare the vaccine. Only two precautions must be taken: first pure cultures should not be contaminated during process; and second, the proper dosage must be obtained.

Method.—Several agar or blood agar slants are inoculated with pure cultures of the organism from which the vaccine is to be made. The bacteria are spread over the entire surface and allowed to grow in the incubator. Twenty-four hours are usually sufficient. Salt solution to which has been added .01 per cent. trikresol, is added to each tube and the bacteria are washed free from the colonies by rubbing down with the platinum wire. The heavy emulsion is then poured or pipetted into a sterile bottle containing glass pearls and thoroughly shaken, either by hand or better in a shaking machine. In this way the clumps are broken up and a uniform emulsion is obtained. The mixture is then poured into sterile centrifuge tubes and whirled for a few minutes to remove any particles of the culture medium which may be present. The supernatant emulsion is pipetted into a sterile tube and is now ready to be standardized.

By standardizing is meant the number of bacteria in a 1 c.c. of the mixture. There are several methods for doing this. Wright's is usually the most convenient. When using his technic we compare the number of dead bacilli in the suspension with the number of red blood corpuscles in the human blood. We select some one we know to have about 5 m. cells in 1 c.c.. A capillary glass tube or pipet with a mark about 1 inch from the tip and a few clean glass slides are all the apparatus needed. One or two volumes of a solution of potassium citrate are drawn up first, then exactly one volume of human blood and finally one volume of the bacterial emulsion. The fluids are immediately expelled on a glass slide, then drawn up and expelled again. This is repeated until a uniform mixture is obtained. Then small drops are placed on each of three or four glass slides and ordinary blood smears made. These are stained with methylene-blue or better still Wright's blood stain. When examined we see that the slide has numbers of bacteria distributed around the blood-cells. A total count is then made of ten oil immersion fields of both red blood-cells and the bacteria. From this count we can determine the number per cubic centimeter of the

suspension. Since we have determined the concentration of the mixture it will be easy to make any dilution we may desire by simply adding more of the normal salt solution. The finished product may now be stored in sterile containers for future use; these may be 1 c.c. ampoules or larger bottle containers. It is my practice to sterilize the product after it is sealed by heating in water bath, usually at 58 to 60 C. for forty-five minutes. They are then tested for sterility by making cultures on suitable media and by animal inoculation. If negative results are obtained the vaccines are ready for use and are then labeled and stored in a cool place until needed for use.

Vaccines versus sera: In the treatment of infections it is necessary to decide whether the therapeutic sera or the bacterial vaccines are indicated. Vaccines, as has been stated above, are bacterial suspensions which, when injected, stimulate the organism to the formation of antibodies. Sera are fluids containing antibodies already formed and are injected into the circulation to supply the blood with antibacterial elements without stimulating the body cells to the production of these substances. Hence in the use of the sera the antibodies are formed in the blood-supply or body-cells of the horse and are then supplied to the patient, and a condition of passive immunity is thus produced which may last a few days or months.

There has been so much written on biologic therapy that it seems almost unnecessary to discuss the indications and contra-indications for vaccines and sera. There is, however, some doubt in the minds of the average practitioners and even some difference of opinion among clinicians who use vaccines as to just when the vaccines or sera are indicated.

Theoretically, sera should only be given in toxemias, such as diphtheria or tetanus but clinical experience has taught us to use sera in acute general infections where the condition of the patient is such that the blood should be supplied with antitoxin, or antibodies already formed, rather than to tax the system by injecting bacterial vaccines thus giving the system the added burden of making its own antibodies.

I believe that when the indications arise for the injection of vaccines there is still another question of vital importance to be settled, namely, whether to inject the autogenous, the stock vaccines, or the mixed vaccines. I am convinced that the autogenous vaccines are the remedy par excellence of biologic therapy, and have made it a law that whenever it is possible to isolate a specific organism or specific organisms, the autogenous vaccines should always be made and given in a scientific, and fearless manner. Their use is scientific and most logical because they produce the specific antibodies most

suitable and most effective for the individual case. They rarely if ever produce harmful or annoying after effects. Clinically, they have given me best results. Their preparation is simple, requires very little time, and is by no means very expensive.

The most serious objection which can possibly be raised is that they require time to prepare, which in some cases can not well be given without adding danger to the individual case by delaying treatment. In rapidly progressing infections due to the more common organisms it has been my custom to give a suitable stock vaccine as the primary dose while the autovaccines are being prepared. Stock vaccines are indicated only in those cases where the suitable autovaccines cannot be readily obtained; for example, in the case of acne, where it requires from six to eight days for the full development of the acne bacillus culture.

I have used mixed vaccines both stock and autogenous where mixed infection was clearly demonstrated. Their use does not necessarily signify the physician's inability to make an accurate bacteriologic diagnosis, nor need there be any hesitation on the part of the doctor because of the fact that they have been designated as unscientific. The fact is that there is a clear, positive, scientific indication for mixed vaccines in all mixed infections. I do not wish to infer that all bacteria found in a given infection must be injected with one puncture of the needle. Indeed, when for instance, treating acne, I have found that best results are obtained by injecting the staphylococcus into one arm and the acne bacillus in the other at the same visit.

One should not hope to cure a case of tuberculosis with a mixed infection by injecting tuberculin alone, nor can he expect to eradicate a cystitis due to the colon bacillus and the staphylococcus by injecting the colon bacillus alone or the staphylococcus alone; they must be combined. Again I have found that, in a number of cases, especially the old chronic or subacute arthritides, neither the primary focus nor the causative organism could be demonstrated. In these one must obviously use a mixed vaccine. Having had a number of just such cases led me to use a mixed vaccine containing as its predominating organism the most likely cause of the infection. For example: In those cases where the primary focus, as nearly as could be determined from the clinical history, lay in the respiratory tract I have prepared a vaccine containing pneumococci, staphylococci and streptococci. In a case of gastro-intestinal origin I have used the *Bacillus coli*, staphylococcus and streptococcus. Where the primary infection was in the aural cavity or the various skin lesions, in fact, any lesion bordering on a low-grade pyogenic infection, I have had excellent results

from the injection of a home-made pyocyaneus and staphylococcus vaccine. This may not seem particularly scientific—it may seem even empiric—but it has given results where all other types failed and is justified on account of the clinical results awaiting a more exact and scientific procedure.

Clinical Considerations.—As you all know sera, up to the present time, are said to be indicated only in toxemias and that bacterins are indicated in the bacteriemias. In the last five years it has been my custom to give antistreptococcus serum in all those acute infections arising from the streptococcus infections, acute streptococcal infections, and in severe cases of streptococcal infections of the extremities.

In a goodly number of cases thus treated which would receive from 20 c.c. to 60 c.c. of the streptococcal serum there would be a decided fall in the temperature and a hasty subsidence of the alarming symptoms. Then I would supplant the use of the serum with vaccines and continue them until full recovery.

My experience with the sera in scarlet fever has been limited to a few cases, but in these I have noticed highly beneficial results and never any untoward effects. In diphtheria we all know the wonderful and prompt results we obtain by the early and fearless use of the sera and that about the only error we can make is not to give the serum in sufficiently large doses.

With the antitetanic serum I have made it a routine practice to give in all cases of gunshot and punctured wounds of the body, and some of those cases of crushing injuries to the extremities where I have reasons to fear a tetanus infection, I give the serum as a prophylactic agent. I have also given the antitetanic serum when occasion arises, as a therapeutic agent, and have a few cases in which it seemed to do the work, although I have also seen it fail. I well remember one case of tetanus which I was called as consultant; the case was well developed and we gave him in all, twenty injections of the serum and his life was saved.

Bacterial vaccines have been administered by me in all types and classes of cases such as are met with in practice. Beginning at the lesions of the skin I have treated with the mixed infections cases of furunculosis, carbuncles, and infections of the lymphatic glands, lesions of the respiratory tract, as chronic rhinitis, asthma, hay fever, bronchitis and tuberculosis. I have also treated many cases of suppurations, including cases of osteomyelitis and infected surgical wounds. I have also treated a number of cases of chronic kidney and bladder infections, also cases of enteritis. In the kidney and bladder cases you should be fairly well satisfied that you are not dealing with obstructing foreign bodies. Then I have treated many of the low-grade pyo-

genic or saprophytic infections, and last but not least has been the use of vaccines of all kinds in joint affections of a chronic type.

Bacteriologically, my cases have included almost every variety of bacteria with varying degrees of virulency. Most common among these I have found the staphylococcus albus and aureus, the streptococcus and the pneumococcus, the bacillus coli and bacillus pyocyaneus.

I will for the sake of detailed consideration now take up some of the conditions I have treated and some of the difficulties encountered:

In acne: To determine and isolate the causative organism is sometimes very difficult if not quite impossible. The determination of the dosage and the interval between the inoculations. The general condition of the patient and the degree of virulency of the infective organism. In a series of ten cases treated I found that the staphylococcus albus was present in fully 90 per cent. Theoretically the acne bacillus should be present in every case. The great difficulty of growing this bacillus is the principle obstacle to the successful treatment of acne vulgaris. The organism requires from five to ten days on the most suitable culture media, one of which is 1 per cent. oleic acid agar. Another reason for failure in the past in my opinion, has been the giving of too large a dosage of the acne bacillus. In all these cases it is necessary to watch and modify the coagulability of the blood. If this is too rapid, which is usually the case, large doses of sodium citrate should be given; on the other hand, if the coagulability is too slow and the patient does not improve immediately, it is necessary to give a number of 15-grain doses of calcium lactate or lactophosphate.

In furunculosis and carbuncles I have treated a number of cases, all with a rapid and satisfactory recovery. Eighty-five per cent. of these cases showed staphylococcus aureus infection.

Glandular infections not due to tuberculous infection, are in the majority of cases due to the staphylococcus albus or aureus, some few being of pneumococcal origin. These cases usually show rapid marked improvement under the vaccine treatment.

I have treated some very persistent and annoying cases of chronic rhinitis with a mixed vaccine which contained the strepto and pneumococcus. The sneezing and discharge in each case promptly subsided and the patients experienced decided relief.

Last August I treated three cases of hay fever with a mixed stock vaccine containing for the most part streptococci; two of these cases had fine results the third experienced no relief.

In tuberculosis with mixed infection I have always made it a rule to use the vaccine together with the tuberculin injections. The vaccines are given every four or five days and the tuber-

culin once a week. Both injections should never be given on the same day as that would interfere with the temperature reaction, which is so important in guiding us in the administration of the tuberculin.

Acute and chronic surgical infections of all types offer, in my opinion, the largest field for the use of vaccine therapy. Under this we include all cases which are primarily septic, incised or gunshot wounds, and osteomyelitis not associated with sequestra and not containing large cavities, pelvic infections, suppurations, appendicitis, etc.

In fully 70 per cent. of my cases I have used the mixed vaccines and have found they give next to the pyocyaneus cases the most brilliant results. If the vaccines are properly made and the dosage and intervals properly graduated, this type should yield cures almost uniformly. The one reason for failure is the fact that not enough care is exercised in the preparation and administration of the vaccine.

Another large field for the use of vaccines is the kidney and bladder infections not associated with foreign body obstruction or organic obstructions. The colon bacilli, staphylococci and streptococci and not infrequently the pneumococci gain entrance to the urinary tract and cause marked frequency and often painful micturition. One of the most striking cases of this type came to my attention in September, 1911. She was suffering from frequent and painful urination extending over a period of about ten months. After taking a careful history and accurate clinical examination, it was found that she had suffered from a dysentery of several weeks' duration and that her trouble dated from that time and had become progressively worse. The culture from the urine made a diagnosis of cystitis due to the *B. coli* and staphylococci. Accordingly, a mixed vaccine was used and she made a rapid recovery and has since remained perfectly free from the trouble.

Another case came to the office in December, 1912, giving a history of a continued illness for four months, with repeated daily attacks of severe pain deep in the perineum associated with chills and high temperature, frequent micturition of a painful character, and large quantities of pus in the urine. Prostate gland was not perceptibly enlarged. Cultures made from the urine showed colon bacilli and staphylococcus. Vaccines of the organism mixed were administered and a rapid improvement was made for some time, then followed a period of nonimprovement. Another culture was made and it showed that the staphylococci had entirely disappeared leaving a pure culture of colon bacilli, from which we made a vaccine and used in the usual way. In two weeks the pains had entirely disappeared and in another month patient was

discharged cured. I could cite many more cases of a similar nature with equally good results.

In Conclusion: Permit me to say that biologic therapy will in a short time, I believe, revolutionize the present-day treatment of many medical and surgical lesions, particularly in the early acute infections; that vaccines have failed in many instances to give the desired results because they were used in cases for which they were never indicated or intended; that autovaccines should always be given preference over stock vaccines when possible to obtain them; that vaccines must not be expected to reconstruct tissues, organs, or joints that have been destroyed by known or unknown pathogenic organisms. The prophylactic treatment against such conditions is what is to be desired by the timely and intelligent use of the proper vaccine. That vaccines and sera, although now used only as adjuncts in the medical and surgical treatment of disease have done much to relieve suffering humanity and have made producers of many who would otherwise have been burdens to society.

ECLAMPSIA*

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No condition perhaps is more interesting to the obstetrician and general practitioner than this one, coming as it does like a flash of lightning from a clear sky; coming frequently when we as well as friends are least prepared. No more serious and apparently clinical pictures could present themselves to the physician than a typical attack of puerperal eclampsia, or a case of hyperemesis gravidarum, two of the most toxic conditions. Therefore, in view of our latter-day conclusion this condition is best defined as toxemia of pregnancy, and owing to the diversified opinion of various authors and teachers and the various conditions which present themselves, the true source of this toxic material is sometimes indeterminable.

Unfortunately there is no unanimity of opinion as to the etiology of this condition, and while it is rather universally regarded as a toxemia, yet the source of generation of this toxic material is open to discussion.

Individually I am of the opinion that there are many sources, just as we know that it does not take the pneumococcus alone to make pneumonia, but other germs are frequently more abundant.

Hirst says that eclampsia is the result of the retention in the body of substances that should have been eliminated. Parvin says it is auto-

intoxication. Edgar classes yellow atrophy of the liver, pernicious vomiting and eclampsia as toxemias arising from hepatic insufficiency to which the pregnant woman is strongly predisposed. Davis says it is a toxemia of pregnancy caused by poisonous alkaloids generated by both woman and fetus. William says it is some previous substance in the blood giving rise to thrombosis in the smaller blood-vessels.

Undoubtedly there are different forms of toxic material affecting the patient at different times of pregnancy. In the early months that affecting the digestive tract, causing hyperemesis and salivation, is different from that in the latter stages causing eclamptic seizures.

As previously stated, I am prone to believe, in view of more accurate knowledge, that the poisonous substance is generated in several locations and in three organs especially, viz., liver, placenta and intestinal tract.

Among the post-mortem changes found in the liver of the pregnant are various forms of necrosis, fatty degeneration, and fatty deposits in the liver cells, paranchymatous degenerations, hemorrhages and fatty deposits. It is essentially a thrombosis of the capillaries with hemorrhage and degeneration of the cells of the periphery of lobules. As these tissues become broken down necrosis occurs and as a consequence the eliminators are overtaxed, the blood-pressure is increased and owing to lack of sufficient elimination the entire system becomes toxic.

In summing up these hepatic changes we must recognize the fact that all glandular organs take on themselves certain changes during pregnancy—enlargement of cells and increased capsular blood-supply—but we must draw the line as it were between a physiological and a pathological gland, a toxic and a non-toxic, or an increased functional condition and a degenerated condition.

The loaded condition of vessels causing an increase of blood-pressure has its deleterious effect on the central nervous system; hence a seizure. Again, while I am free to confess that the placental theory of toxemia is not advocated by the larger number, yet from observation I am led to believe that many cases of the latter part of pregnancy are due to defect of the contents of the uterus. The large blood-supply of the placenta and the many diseases which are banded down from one generation to another, such as syphilis and tuberculosis, make it evident that there are necrotic spots found in the placenta from which absorption could readily take place. I believe if the Wassermann test was more common in all our pregnant cases we would be surprised at the specific reports. In my early practice I began to observe the contents of the uterus in all cases which were loaded up with toxic material and I seldom found one that expelled its contents perfectly.

* Read at annual meeting of Eleventh District Medical Society, March 19, 1914.

In three cases during five years I have had patients injured from falls, in all of whom I had previously examined the urine and found it perfect, and within ten days I would find general toxemic symptoms. In each of these cases the births were premature, convulsive seizures were imminent, premature delivery took place, and I found a large black clot in which the serum had been absorbed, and made it plain to my mind that the origin of the toxic material had been within the uterus. I would kindly ask you to observe hereafter the contents of the uterus and see if you do not find an imperfect placenta or black clot indicating ante-mortem hemorrhage.

The intestinal tract, of course, is the great eliminator, or sewer, as it were, of the body, and any interference of the proper evacuation of its contents, or rather anything which causes a retention of its products, places the patient in a condition for intoxication. Our food is complex in its character and frequently poorly prepared for digestion and assimilation. The intestinal tract is long and has for its purpose great absorptive qualities owing to the richness of its blood-supply, and as a consequence toxic material as well as non-toxic material is absorbed, and after absorption there remains the other great eliminator, the kidney, to dispose of the material generated. The kidney becomes overworked and as a consequence this organ becomes hyperemic and a temporary nephritis ensues; hence an albuminuria.

Women in general are constipated, due to sedentary habits, and in fact they are poor water-drinkers, and Nature, calling for a large amount of food, due to the growth of the child, makes a lack of compensation between the ingoing amount and the outgoing; decomposition ensues with a complex variety of germs, largely of a pathogenic nature, and as a consequence elimination is not sufficient and retention ensues.

In case of twins toxemia is more likely to occur than in single births, and it is presumed to be due to the fact that the circulatory system of the woman is unable to take up and eliminate east-off epithelium sufficient to prevent a retention of the toxic material. Again, in hydramnios we have the same condition existing. However, the most important focus of disturbance within the uterus is the placenta.

A few words in regard to albuminuria: Our old authors believed that this organ was the seat of trouble. We now believe that all nephritic conditions are the results of the toxic material and the albuminuria is simply the results of a toxic irritation, acute in character. I believe the nephritis of pregnancy to be a myth. Post-mortem examinations do not show a true nephritis except in those cases having a previous history of such. I do not believe there is left any

serious kidney injury as a result of toxemia, and I believe that those cases having a chronic nephritis remaining showed a line of nephritic symptoms previous to pregnancy.

Now, I am of the opinion that eclampsia seizures can be prevented in almost every case, and when such seizure occurs it is due in 95 per cent. of cases to causes discoverable and preventable by the physician, or to inattention or indolence on the part of the patient.

As proof of the above assertion I will say, since making this a special work, that I have had but two cases of eclampsia in the last 1,100 births, and in both of those cases I had no previous knowledge of the cases until one week before birth and the time for elimination and treatment was too short.

The symptomatology of eclampsia to the observing physician reads like an open book. The symptoms begin insidiously and not suddenly, as some seem to think. A headache, some nausea, slight disturbance of vision. Nausea at a time when past the period of emesis is suspicious. Backache is common, and the eyelids and ankles are apt to be puffed a little. These conditions of swelling are erratic, coming and going. The tongue is often coated, there is a sluggish condition of the bowels, irregularity of heart-beat, loss of appetite and change of the disposition in the woman. Dizziness is often complained of and there is a condition of emptiness of the stomach. If we make an examination of the urine we find in 80 per cent. there is albumin, but these symptoms should lead us to suspect an accumulating toxemia in the system. Following some days or weeks of these symptoms there will be a period of twitching of the face and eyelids. Epigastric pain is often severe in character, flashes of light or dark spots intercept the vision.

These beginning symptoms are what are called prodromal symptoms and call for a certain line of elimination which I will refer to when treatment is considered. I find the blood-pressure apparatus very useful. Out of 1,136 blood-pressures taken by Edgar in pregnant women, the blood-pressure was 118. An increase of 30 keeps the patient within bounds of safety. Blood-pressure above 150 calls for active treatment for the purpose of lowering this blood-pressure. Should our treatment fail, typical convulsions begin. It is said by some that this disease is preceded by an aura similar to that found in epilepsy, roaring in the ears or dizziness, nightmare, double vision, or blindness. The pupils are dilated or contracted, but changeless. The convulsion is exactly like that of epilepsy, tonic and clonic, spasm, epithotonos and coma. The tonic spasms last a very little time, coma following in a very few minutes. Coma may last for days or for a brief space of

time. One convulsion may kill the babe and three or four almost invariably will do so.

These in brief are the classical lines of symptoms and lead up to the most practical and important part of the subject, viz., treatment. We will classify this into three stages, believing them to be essentially different: First, preceding attack and during the manifestation of prodromal symptoms. Second, during attack. Third, following attack.

The primary object of all lines of treatment, whether during the prodromal stage or following the attack, is lowering the blood-pressure. We cannot scientifically treat eclampsia without the use of a blood-pressure apparatus. It is both the diagnostician and prognosticator. A blood-pressure of less than 150 means comparative safety. You will observe that every line of successful treatment advocates lowering of blood-pressure.

Drugs and means to cause elimination through skin, kidneys and bowels have this object and effect. Blood-letting, emptying the uterus, nitroglycerin, veratrum viride, bromids, chloral, all in different degree have the same effect. Pay heed to the little indicator on your blood-pressure apparatus.

Prophylaxis is never of greater utility than in this condition, and the physician who is alert will be enabled to tide 95 per cent. of the cases showing a toxemic condition to a successful end. The idea of previously engaging a physician has already permeated our large centers and it is the duty of the country practitioner to inform his pregnant patients of its importance. True, we have some people who do not engage the physician in advance. The responsibility is theirs. Refuse to attend one and tell them why and the news will go over your territory.

Less than one month ago a lady 22 years of age was brought to my office. Urine when boiled would not turn out of an inverted test tube. Face swollen, limbs immensely large and glazed in appearance; pain in head; dizziness and epigastric pain; partially blind. I gave her a daily sweat. Four or five watery stools were produced each day. Half a gallon of water to be drunk each day as a diuretic. Her blood-pressure was 195, and a seizure was imminent. She was placed in bed. Absolutely a milk diet. Nitroglycerin 1/100 gr. was given every four hours. Calomel and soda for one day. Each morning one heaping tablespoonful of cream of tartar was given. Albumin the thickness of brown paper when labor began. Blood-pressure after pains began was 145. No seizure. This illustration of one case gives a line of treatment in prophylaxis.

The treatment of the prodromal stage is much the same as above illustrated. First take the

blood-pressure. This is for the purpose of ascertaining whether or not treatment is having the desired effect. Place your patient on an absolute milk diet; more faith can be pinned to the milk diet than to the use of drugs. If the patient shows decided improvement an addition of fish and cereals may be added.

The three avenues of the elimination are the skin, kidneys and bowels. The elimination from the skin may be done in many ways: First, hot baths until free perspiration ensues; second, alcohol lamp or hot water containers in which irons and hot bricks are placed, the patient well wrapped up to the chin, until thoroughly perspiring; third, more efficient and thorough sweating can be produced by hot packs in bed.

The second avenue of elimination is the kidneys, and no better diuretic can be given than large quantities of water; compel your patient to measure amount, which should be at least a half gallon per day.

The third eliminator, the bowels, can be acted on by a variety of drugs. I think it is wise to begin the treatment with a dose of calomel and soda, for its action on the hepatic cells. Each morning I usually give some cathartic causing watery stools. Nothing better than liquorice and jalap powder compound, or instead, cream of tartar, mineral water, epsom salts, etc.

If your patient is treated over a period of time some iron preparation may be used. This is the line indicated during the prodromal stage. Taking the blood-pressure from time to time will tell you whether or not your treatment is meeting with the results that you are anticipating.

The second consideration for treatment is that referring to the seizure itself, and I am free to confess that we should not rely too much on drug treatment. The patient should be allowed plenty of air and not allow all to be shut off by family and friends. Some object should be placed between the teeth in order to prevent injury to tongue. Chloroform has been recommended from time immemorial, but pathologists of late are claiming the poisonous effects of chloroform on the liver-cells are identical with that of eclamptic seizure; hence a contra-indication. I do not believe there is any known remedy which will abbreviate the attack itself.

After the convulsive seizures have been established, I have the strongest faith in the immediate removal of fetal metabolism and irritation in order to control and cure the eclamptic attack, but I want to protest against the very rapid, unscientific and unintelligent evacuation of the uterus. Due consideration must be given for the cervical barrier. A rigid non-dilatable cervix must have attention, fearing the shock may be more dangerous than the seizure itself.

Three things must be considered: First, a complete manual or instrumental dilatation of cervix; second, version or application of forceps in delivery; third, delivery of the child.

Remember that these cases occur four times as frequently in primipara as multipara. The soft parts are more rigid in primipara.

If possible pack the cervix for a few hours. Labor will begin, and although it may not be perceptible to the examining finger, yet I assure you that the pressure will be sufficient to soften and make dilatation easier and less shock will occur. In the meantime dilatation and lowering of blood-pressure begin. Give croton oil in two-drop doses every hour until free evacuation. A hot pack until your patient perspires for thirty minutes. Give chloral hydrate in 40 to 60 gr. doses per rectum; sufficient should be given to keep your patient stupid.

Always manually dilate if possible. Your fingers are the safest instruments. Should you use a steel dilator use it carefully and take plenty of time. On several occasions I have used the Duhressen method of clipping the cervix in four to six places. This method is to be commended. If however, it is used, I urge the complete dilatation by means of fingers rather than with the child's head. You are less likely to extend incision to the body of uterus by manual dilatation than by forceps.

For the cure of eclampsia cesarean section has been much advocated, but unless there are other indications, such as a contracted pelvis, I am of the opinion that the shock of the operation is greater than shock of a forceps or version delivery, and therefore do not believe that the operation has any place and should not be advocated in a normal pelvis.

One method which I have not referred to is that of blood-letting, and I wish to give emphasis to the fact that in urgent cases which have continuation of convulsions after birth has taken place, we have no better means of lowering the blood-pressure than blood-letting. This is especially indicated in the plethrotic, full-blooded with a large, full, bounding pulse. The amount of blood allowed to flow should be guided by the condition of the pulse. Sufficient should be taken until you can recognize a softening of pulse. The sudden emptying of vessels perceptibly relieves the tension, and this should be given due consideration.

The serum treatment of puerperal toxemia has not yet established itself; good reports have come from the use of Ringers' serum, placenta serum and horse serum, but the reports are so vague and indefinite that they cannot be relied on and we have as yet to determine their value, but I believe that in a short time they will prove efficacious.

FRACTURE OF THE SKULL—REPORT OF TWO CASES*

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To enter into a discussion covering all the details of fracture of the skull and its treatment would occupy more of the time than I feel should be allotted to any one paper, so I will only briefly consider the subject and dwell on a few points in the care of these cases that I deem of importance. In a general way all fractures of the skull can be placed under two divisions, viz., fractures of the vault and fractures of the base.

Fractures of the vault can be further subdivided into fissured, depressed and punctured. Those of the base are nearly always fissured, though rarely the nature of the injury will be such as to justify the classification of punctured, such as the thrusting of a sharp instrument through the nasal or orbital vault.

On the basis of the skull's elasticity, von Wahl grounded his classification of all cranial fractures, whether of the vault or of the base, into two great divisions, viz., that of bursting fractures and bending fractures. To understand this it is necessary to go deeper into the details of what happens on the application of violence to the skull.

The result depends chiefly and is influenced by the workings of four factors: (1) degree of violence; (2) nature of the violence; (3) extent of the area of impact; (4) degree of skull's elasticity. As to the first, it is useless to point out that the greater the degree of violence the more certainly will there be a resultant fracture.

A consideration of the nature of the violence is of great assistance in coming to a conclusion as to the character and extent of the fracture; for instance, should the head be caught between two compressing forces, as the bumpers of a car, or similar forces of lighter degree, the resulting injury would be due to a bursting force which would first manifest itself in a base fracture; should the degree of force be greater, the vault would be fractured to an extent ranging from a simple fissure to a complete caving in of the walls of the cranium; this same principle holds good when applied to head injuries resulting from falls, the head being compressed between the resisting force of the ground or floor and the propelling force of the after-coming body.

The extent of the area of impact and the skull's elasticity should also be considered in arriving at a proper estimation of the character and amount of damage done. Small or sharp-pointed instruments coming in contact with the skull, where the propelling force is great, nearly always result in a depressed fracture of small area, involving

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both tables of the skull; blows from bodies of large area may result in fracture of both tables, but often only the inner table will be splintered or depressed.

Where the elasticity of the skull is great, as in young children, it is capable of resisting a far greater force, comparatively, without solution of continuity of the parts, hence the far less percentage of head injuries resulting in fracture in children than in adults.

Diagnosis.—The diagnosis of fractures of the vault should be easily made in most cases. Where the fracture is compound and depressed it is self-evident. Only in those cases in which the scalp is not broken and the outer table intact or simply fissured, does the question of diagnosis become puzzling. Too great importance should not be attached to inequalities or slight depressions in the skull surface, which may be natural, or the result of some former injury. Neither should one make the error of mistaking a line of suture for a fissured fracture. These are oftentimes very misleading, and history records errors of this nature, ludicrous in the telling but of serious import to the patient.

The *American Practice of Surgery*, quoting von Bergmann as authority, says that Hippocrates once mistook the sagittal suture for a fracture; and the same authority reproduces the anecdote of Sarcerotte, who rescued a poor priest from imminent danger of trephining by showing that the supposed fissure was no more than the suture line of an occipital Wormian bone. It is said the grateful patient willed his skull to his rescuer. In this day and age, the only thing one would fall heir to in a case of similar nature, would be a lawsuit.

In case the question of fracture is in doubt, as in fracture of the inner table, and where the symptoms of cerebral pressure are present, a trephining should be done, as in this way only can the doubt be removed. Kocher, in his late work (p. 176), says: "It can be confidently asserted that, provided asepsis is guaranteed, there should be no hesitation about trephining in any case of cerebral pressure. We have regretted many sins of omission in this respect, but very seldom have we had occasion to repent the performance of an operation." On page 190 of the same work Kocher quotes Horsley as follows: "In his communication to the International Medical Congress in Berlin in 1890, he stated that he could not recollect a single case where he would not have interfered in complicated cases of laceration of the brain, whether recent or of old standing. Further, he also advises active interference in all cases of simple laceration of the brain in order to prevent the occurrence of epilepsy sooner or later."

This is strong testimony in favor of the radical rather than the expectant plan of treatment.

Personally, I am thoroughly convinced of the wisdom of the advice and do not hesitate to trephine when in the least in doubt. It adds but very little to the gravity of the case. On the other hand, should a possible depressed fracture of the inner table or a blood-clot from a ruptured meningeal vessel be overlooked, your patient is probably doomed to an early death, or, what is infinitely worse, an epilepsy or hemiplegia.

From the inaccessibility of the part, fractures of the base are not susceptible of being diagnosed by exploratory operation; here we must rely on clinical symptoms, chief of which are cerebral pressure, as manifested by choked disk, delirium or unconsciousness; disturbances of the special and motor functions; hemorrhage from the ear or nasal cavities, and what is said to be pathognomonic, escape of cerebral fluid; ecchymosis around the eyes, the pharynx or the mastoid region coming on some hours or days after receipt of injury is also said to be strongly indicative of fracture of the base.

Treatment.—In a case where a diagnosis of fracture of the vault has been made, or where the diagnosis is in question but with symptoms of cerebral pressure present, I can conceive of but one safe line of treatment, and that is trephine. As stated before, this procedure adds but little to the gravity of the case and may be the direct means of saving life. It is remarkable with what rapidity these cases recover after the depressed fragments have been raised and clots removed.

Unfortunately, fractures of the base have to be left to Nature's effort and the expectant plan of treatment. This applies, particularly, to the fissures. In case of punctured wounds through one of the cavities, as the orbital or nasal, one should if possible follow the track of the wound into the cranial cavity. By so doing, foreign bodies that may have been carried in can be removed and drainage established. This may prevent the formation of a cerebral abscess and greatly enhance the patient's chance of recovery.

The surgical technic of these cases can be summed up in a few words—perfect asepsis, perfect hemostasis and absolute gentleness. The trephine should be used in entering the skull. Chisels and mallet should be avoided. If it becomes necessary to enlarge the opening, this should be done with one of the many excellent bone-cutting forceps, such as Luer's or Devilbiss'. With these the bone can be cut without splintering.

In the preparation of the patient it has been my plan to administer $\frac{1}{4}$ gr. of morphia hypodermatically one-half hour before operation. This materially lessens the amount of anesthetic required, also the period required for induction of anesthesia. The head is then shaved completely, no matter how small the scalp wound, the whole scalp scrubbed with soap and water.

followed with ether and alcohol, and finally the area in which the incision is to be made is swabbed with iodine. A strong rubber band is then placed around the head. This usually gives one satisfactory control of bleeding from the edges of the scalp incision. Kocher recommends a continuous running lock stitch suture of heavy silk through all thicknesses of the scalp just above the line of incision. This is placed before the incision is made. This appeals to me as being a most logical procedure. After the trephine opening has been made, fragments of bone and clots removed, all bleeding vessels in the dura are ligated with fine iodized gut. A small strip of gutta serena tissue or a few strands of iodized gut are placed in contact with the incision in the dura, which has been repaired, if possible, and the scalp wound closed with No. 2 iodized gut. I have never used silk nor had occasion to regret the use of gut.

In concluding, I will briefly report two cases which came under my care during the past five months.

CASE 1.—Mr. S., farmer, aged about 50, referred by Dr. Mount, Polo, Mo., Oct. 9, 1913. When engaged in walling up a well 14 feet deep, patient was struck on the head in the right parieto-occipital region by a rock which was precipitated to the bottom by breaking of the rope by which the bucket was being lowered. He immediately became unconscious and remained so that day and the next, in which state I found him when first examined about 7 p. m. at Wesley Hospital, Oct. 11, 1913. The only evidence of injury was a punctured scalp wound in the above-named region. The patient was immediately taken to operating-room and prepared for operation. After shaving the head it was plain to be seen that we had a compound depressed fracture to deal with; as will be seen by the specimen, it was impossible to remove the fragment through the break in the skull without enlarging the opening, so a button was removed and the opening still further enlarged by use of forceps. The fragment was found completely detached from the surrounding skull margin and depressed at least $\frac{1}{2}$ inch. With a little patience and care it was removed without damage to the dura; through a small rent in the dura, by careful probing, a small specula of bone was discovered which had penetrated the brain substance about $\frac{1}{2}$ inch. This was removed with forceps, a double strand of No. 2 catgut inserted through the opening in the dura for drainage, the wound closed with No. 2 gut; the post-operative course was uneventful and the patient went home one week from day of entrance to hospital. The following Tuesday, or ten days from day of operation, he spent the day digging potatoes, and I am informed has been doing farm work ever since without the least inconvenience on account of the injury. I cite this simply to show the remarkable rapidity with which some of these cases recover.

CASE 2.—Mr. Wm. T., farmer, aged 53, referred by Dr. Higdon, Polo, Mo., Feb. 19, 1914. Slipped on icy running-board of wagon and pitched off striking the frozen ground on his head. Remained unconscious two days when he was brought to Wesley Hospital. When I first saw him, about noon, Feb. 21, 1914, he was wildly delirious; physical examination revealed a small scalp wound on right side in posterior parietal region; also an extensive ecchymosis surrounding left eye and extending far out on the cheek; also slight ecchymosis of right eye; pupil of right eye dilated. This was one

of the puzzling cases and while a fracture of the base was strongly indicated, solely on account of the extensive ecchymosis around the eyes in the absence of visible injury in that region, we suspected there might possibly be a depressed fracture of the inner table in the region of the scalp wound; realizing the danger of future complications, should this be present and not attended to, it was decided to operate. The patient was then taken to the operating-room and prepared as usual and a button removed at the site of the scalp wound; the two tables of the skull were found to be intact; on opening the dura a small black clot was exuded; this from appearance must have been several hours old and was no doubt the result of injury to a small cerebral vessel at the time of the accident. Intense intracerebral pressure was manifested by the bulging up of the brain into the trephine opening; this was so pronounced that it was found impossible to close the opening in the dura. A small strip of gutta serena was inserted into the opening in the dura as a drain and the scalp wound closed with No. 2 catgut. For several days the postoperative course was rather stormy; patient being wildly delirious, but from that time on improvement was rapid and on the fourteenth day he was discharged from the hospital; he was still weak physically but mentally his condition was practically normal.

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LEGAL ASPECTS OF MEDICAL PRACTICE AND SOME REFERENCES IN PARTICULAR TO EYE WORK*

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Having been a so-called "expert" witness in five damage suits in the past year, together with the fact that no paper of like character has been read either in the eye-throat section or the general section of the Jackson County Medical Society in my recollection, is perhaps sufficient excuse for my selection of the subject-matter here considered.

Law, as to origin, is common law (judge-made law, or case law) and statutory law (state or federal statutes). England and the United States use the common law system with the jury the most important factor, while in almost all continental Europe the civil law (old Roman) is used with the jury secondary and the judge the important factor.

A doctor comes into relation with the law professionally along the following lines:

1. As a plaintiff (right to practice, collect fees).
2. As a defendant (right to practice, malpractice, violation of professional secrecy).
3. As a witness (ordinary or expert, or both).
4. As a law maker (city, state and national).
5. As a law enforcer (public health service, city, county, etc.).
6. As a lawyer.

* Read before the Eye-Throat Section, Jackson County Medical Society, Kansas City, Mo., March 12, 1914.

7. As an educational examiner (state and army boards).

The first three apply to any doctor while the last four are examples of double occupations and will not be dealt with here. Doctors are not obligated to jury duty but may serve if they choose when summoned.

RIGHT TO PRACTICE

Educational requisites vary from diploma only to diploma and examination. Nearly all states recognize different schools of practice (regular, homeopathic, eclectic); more than half recognize osteopathy and optometry, and a few chiropractics (my native state, Kansas, one of them, Heaven forgive her). In some states (Ohio, Nebraska) Christian Science, for a fee, is regarded as practicing medicine, while in Rhode Island and Kansas it is not, and in some other states (Missouri included) it is simply ignored. One important requirement for practice is registration of certificate. License may be revoked for making false promises, false advertising, gross immorality, any felony, fraudulent use of diploma and "dishonorable conduct." A corporation cannot be licensed to practice medicine, but individual physicians may form a corporation and make contracts for the services of themselves and other physicians. A non-graduate (medical student) is liable under statutory penalties even if operation is performed or medicine given under the direction of a licensed physician, and yet a physician can collect fees for an assistant who is a non-graduate (medical student). The giving of household remedies without fee is not the practice of medicine.

FEES

The existence of a contract (written or verbal) materially alters some of the following statements:

Attendance not compulsory. Doctor may refuse any case he chooses and he can stop attendance at any time provided he has a good reason and gives patient reasonable time to get another doctor.

Examination fee. Insurance examinations generally made by contract. As the examination is practically the diagnosis (with or without treatment) for private cases, the implied contract would be for pay, but might be modified by the locality custom, or the custom of that particular doctor.

Result fee. A doctor's taking a case in no way obligates him to benefit, let alone cure it, and the fee has nothing to do with results.

Guarantees. Generally given by quacks.

Amount of fee. Must be "reasonable," taking into consideration what doctors of similar earning power under similar circumstances would charge.

Consultants fee. Must be paid by patient, not by doctor calling him.

Witness fees. Ordinary witness same as any one else. Expert witness cannot be compelled to testify as an expert without adequate compensation, and is not in contempt if he refuses to testify without it. A medical expert under contract that he shall receive a certain percentage of the judgment cannot recover.

Liability of Third Parties. Doctors must show promise (expressed or implied) by such third party to pay. A man must pay for his wife and minor children if no divorce exists. If an adult child lives with its father, the father cannot be held for the child's doctor bill. A doctor cannot recover for a child taken into a family (not adopted). If a husband is penniless and his wife has property late cases seem to hold that she can be made to provide him with necessities. Authorities conflict as to a widowed mother paying for her minor children. A person cannot be held for attendance on his parents or his relations-in-law. An employer cannot be held simply for calling a doctor to attend an employee. Certain authorities hold firms responsible for doctor's attendance on emergency cases called by a foreman, manager, etc. Employer's liability and workman's compensation laws have not been generally adopted in this country. A federal statute relates to railroads.

Fees Due When. Generally, on the completion of the service.

Account Books. A visiting list is admissible to show the number of visits made, but figures and symbols to indicate the character and amount of services rendered cannot be received as books of original entry.

Last Illness. In absence of special statute a doctor's bill for last illness takes no precedence over ordinary accounts.

MALPRACTICE

Only the more important or more unusual features will be mentioned. The doctor must use ordinary skill, judgment, care, knowledge and diligence; not the highest there is, but such as is common to men of the same school of practice in localities similar to that in which he practices and with due regard to the advanced state of medical science at that time. He is not responsible for errors of judgment. He must use accepted methods and not experiment. He must give the patient and those caring for him careful instructions. He must take all precautions against infecting his patient. The number of times a doctor is to see a patient is left to his judgment, consequently if he neglects to come when urgently necessary, and especially if notified, he is at fault. A doctor who commits an error under the influence of liquor is responsible for same. In Illi-

nois, Texas, Montana, Delaware and also the courts of the United States, the plaintiff in a malpractice suit cannot be compelled by the defendant to submit to an examination to determine the character and extent of the alleged injuries. In Missouri and Kansas (and other states) he can.

Prescription. If a doctor writes it negligently or ignorantly he is liable in damages and the druggist being negligent in not correcting the mistake does not excuse the doctor. The ownership of a prescription has been definitely settled; it does not belong to the patient; the doctor does not sell it and the patient does not buy it; the druggist may not refill it or give a copy of it to the patient without the consent of the physician.

Consent for Operation. Must be had. If patient is not competent must be given by some one legally authorized.

Post-mortems. Consent by the surviving wife or husband or next of kin must be had (except in case of coroner's examination).

X-Ray. Same rules obtain as in applying any other system of treatment.

Christian Science. It is harder to recover from these healers than from a doctor. It is not enough that one proves that their statements that they can and will cure a case are false (cancer, for instance), but it must also be proved that the statement was made with fraudulent intent.

Partnerships. All are liable for the malpractice of any one of them. A doctor is not responsible, however, for another doing his work while he is away or sick.

Contributory negligence of plaintiff. In ordinary case must operate as an efficient cause of the injury complained of.

Statute of Limitations. Runs from one to five years from time of injury. (In Missouri, five years.)

Dying Declarations. In order that such declarations shall be admissible, the declarant must at the time of declaration have been both *in extremis* and fully conscious of impending dissolution.

Damages Awarded. Nominal, compensatory or punitive.

Liability Insurance Against Malpractice Suits. The Missouri State Medical Association assumes for its members the responsibility to some extent. I understand that certain physicians' defense associations have been debarred from doing business in this state.

EXPERT TESTIMONY

The question of competency of a witness to testify as an expert is one exclusively for the court. The opinion of medical experts will not be received as to facts within the common experience of men. Physicians and surgeons are com-

petent as to the cause, duration and curability of disease. Also as to the effects of certain poisons on the human system. The opinions of doctors have been received as to chemical analysis, but bear less weight than that of chemists. An expert witness can refresh his mind from his notes, but cannot read them entire to the court. Physicians and surgeons in the absence of statute are not required to have a license from any board or any diploma from any medical school in order to testify as experts (nurses, druggists and priests have qualified as medical experts). They do not have to be actively engaged in practice. A specialist cannot as a rule express an opinion on a question outside his specialty, although he may have practiced general medicine; but a general practitioner has been allowed to express an opinion on a case the like of which he had never seen (glaucoma).

The advantage of the hypothetical question is that it gets before the jury exactly the facts on which the medical opinion is founded. The expert is not the one to determine the facts; that is for the jury alone. A hypothetical question in the Thaw case contained fifteen thousand words. Another case had one with twenty thousand words and was answered by three, "I don't know."

In France and Germany, experts are appointed by the court or selected jointly by the contending parties; the court may or may not be bound by their opinions. In time our expert system must be changed as it is not satisfactory to the judges, the juries or the experts themselves. Shastid, in speaking of the admission of evidence to a jury in this country terms the Rules of Evidence "truly astounding."

PRIVILEGED COMMUNICATIONS

Statutes covering this subject have been enacted for the purpose of facilitating full and confidential disclosure by patient to physician of all facts, circumstances and symptoms, without fear of their subsequent enforced disclosure and publication on the witness stand. If a defendant sends a physician to examine plaintiff for the purpose of testifying and the physician undertakes to treat plaintiff, the physician cannot disclose information thus obtained. The right for privileged communication remains in force even after the death of the patient or of the physician. It is waived when the patient brings suit.

EYE WORK

In the preceding general medico-legal considerations an occasional reference to eye work will be found. In addition thereto oculists would take particular interest in vision and its defects and their effect on earning power, ocular tests for malingering, ocular effects of drugs, ability to see under peculiar conditions, ocular signs of

identity, eye after death, ophthalmic-sanitary legislation, etc. This paper has already taken up considerable time and space, and these subjects to be of value should be read in detail in the works quoted at the end of the paper. For handy tables for loss of (visual) earning power based on the rather formidable Magnus-Wurdeman algebraic formula, I would refer to Fick's *Diseases of the Eye* (1896), pages 423 to 425. As a reference work I particularly desire to commend Culbertson's "Medical Men and the Law" (1913), from which the substance of this paper has in large part been drawn.

POINTS

1. If an oculist fits glasses, that is practicing medicine; but if an optician (optometrist) does the same thing, it is not.

2. Prejudicing jury on account of expert's fees. The plaintiff's attorney always tries to discredit the defendant's expert by showing the comparatively large fee he is to get. If the plaintiff pleads poverty to get out of paying costs of suit, the plaintiff's expert depends for his fee on the verdict going to the side he is testifying for.

3. Personal injury suits. Before any suit is allowed to be filed the plaintiff should be compelled to appear before a board of three physicians for the purpose of ascertaining the character, permanence and extent of his alleged injury. Of this board the plaintiff and defendant should each choose one doctor and the two chosen select a third. They should all examine the plaintiff at the same time and if two out of the three did not agree that the injury was one materially affecting the plaintiff's physical or mental well-being, the case ought never to come to trial. The advantage that a doctor who had attended the case before might have would be offset by not having him on this board at all. Let him testify as an expert.

4. How far can a general practitioner go in a specialty? This is of importance in two ways: first, in accident insurance cases and second, in incurring a malpractice suit for himself on a private case.

5. Steam and electric railway operatives, with rails to limit their line of travel, have their vision tested. But an automobile driver, with his course limited only by the heavens above and the earth beneath, can run a sixty-horse-power machine through the thickest city traffic with a vision of perhaps less than 50 per cent. normal.

6. The blinding effect of high-power auto headlights (especially when set parallel with the ground) and their influence in causing accidents is well recognized, but Chicago is the only city I know of that has a regulation on this point.

If the owner or manager of a big factory gets his eye hurt he either goes direct to an oculist

or has his family doctor direct him to one; but if one of the employees gets his eye hurt he is sent to the general surgeon or general practitioner who does the work for the company. The practice of medicine is so vast now that there are about twelve working divisions or specialties in it and it is not within the range of possibility that the general practitioner can, in an eye case, come within that legal limitation which says that he shall have skill and knowledge "with due regard for the advanced state of medical science, at the time in similar localities." If the custom of a locality is to send eye injuries to an oculist it cannot longer be ignored in law.

GENERAL REFERENCES

- Law in its Relation to Physicians, Taylor, 1900.
 Legal Medicine, Peterson and Haines, 1903.
 Medical Jurisprudence, Withaus and Becker, 1909.
 Forensic Relations of Ophthalmic Operations, Shastid (Wood System), 1911.
 Injuries of the Eye, Wurdemann, 1911.
 1221 Rialto Building.

GRAMMAR-SCHOOL GRADUATIONS

We commend to the serious attention of all school authorities the proposition to abolish grammar-school graduating exercises. We believe that from the educational viewpoint no valid argument can be brought forward in favor of them. They are a concession to a more or less urgent demand on the part of inexperienced pupils, thoughtless teachers and unwise parents for a vain display, which is equally unjustifiable from the standpoint of all three of the parties named. The teachers consume on such graduation exercises time and strength which should be expended otherwise; the parents have to pay for expensive graduating dresses; and the pupils lose several weeks' time that could far better be put into a thorough review of the year's work, which would give them an adequate preparation for the first year of high school. Worst of all, a premium is put on leaving school at the completion of the eighth grade. There is no more reason for putting up a spectacular celebration at the close of this grade than at the completion of any previous year of study. No child who can possibly stay in school longer should be permitted (not to say encouraged) to leave after passing through eight grades. Eight grades do not thoroughly prepare any ordinary child to enter active business, professional and social life successfully. Exceptional ability may sometimes overcome the handicap of early graduation; but the exception only proves the rule. Public opinion should establish the rule that all our children should go out into life with an adequate training for successful, influential careers. This training is furnished by not less than twelve grades, begun at six years and ending at eighteen years. The child who leaves at fourteen and goes to work is immature and unfitted to shape out for himself a useful future. Why mark this period in his life with a celebration, and attract attention to it as a turning point? Rather let us put the goal of the child's ambition at the close of the high-school course and make him feel that to graduate at that time is a real honor, worthy of celebration by the admiring presence and plaudits of parents, neighbors, teachers and all friends. Abolish grammar-school graduations! They are wrong in theory, and in practice they are harmful to all whom they concern.—*Education*.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

JUNE, 1914

EDITORIALS

THE FIFTY-SEVENTH ANNUAL MEETING

The Joplin session of the Association opened auspiciously on May 12 with a registration of over 200 at the close of the first day. Nothing distracted the attention of members from the work in hand or disturbed the proceedings. The scientific program was carried out as prepared and each session completed the schedule without cutting off the authors in the midst of their papers or shortening the time for the discussion of papers.

Especially noticeable were the meetings on Thursday morning and afternoon. In the past Thursday has been a great disappointment because the members usually deserted the meeting after the election of the president and orators. This year the two sessions on Thursday were as well attended and the papers as interesting and the discussions as animated as those of the other days.

The radical change in the constitution is responsible for this forward step toward better scientific work. This change places the election of the president and all other officers in the House of Delegates, and directs that the House of Delegates shall complete its work on the first day of the annual meeting. In future, therefore, delegates will have time to attend the scientific sessions, read papers and take part in the discussions.

The House of Delegates appropriated \$1,500 to the defense fund and restricted the amount to be expended on any one case to \$100. The rules governing the right to defense protection were made more stringent and those who fail to pay dues within the constitutional limit will forfeit their privilege of defense against suits growing out of cases attended during delinquency.

The officers elected for the ensuing year are: President, H. C. Shuttee, West Plains; Vice-Presidents, J. A. McComb, Lebanon; G. O. Cuppidge, Moberly; W. G. Estill, Lawson; T. A. Coffelt, Springfield; W. A. Clark, Jefferson City; Councilors: Fifteenth District, H. S. Crawford, Harrisonville; Nineteenth District, S. V. Bedford, Jefferson City; Twenty-Second District, G. S. Cannon, Farnfeldt; Twenty-Sixth District, W. H. Breuer, St. James; Twenty-Seventh Dis-

trict, J. H. Elliott, West Plains; Twenty-Eighth District, T. O. Klingner, Springfield. Delegates elected to the American Medical Association were A. W. McAlester, Jr., Kansas City; E. H. Miller, Liberty; H. L. Reid, Charleston; these with the two holdovers, R. M. Funkhouser and E. J. Goodwin, constitute our representation in the House of Delegates of the American Medical Association. The Defense Committee consisting of R. E. Schlueter, R. Emmet Kane and W. B. Dorsett, of St. Louis, was reelected.

Several cities contended for the privilege of entertaining the Association next year. Louisiana, Excelsior Springs, Jefferson City and St. Joseph all received support, but St. Joseph easily took first place and was chosen for the 1915 session.

Carter-Shannon County was taken out of the Twenty-Seventh District and placed in the Twenty-Fourth District. Dallas County was taken out of the Twenty-Sixth District and placed in the Twenty-Eighth District. Stoddard County was hyphenated with Butler County and both placed in the Twenty-Fourth District.

Weather conditions were ideal during the entire meeting. Every member of Jasper County Medical Society exerted himself to the utmost in making the visit of the members pleasant and enjoyable. The county society is to be commended for the excellent manner in which the arrangements for the meeting and the accommodations for the guests were perfected.

THE ATLANTIC CITY MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The sixty-fifth annual session of the American Medical Association will convene at Atlantic City, June 22-26. The progress of medicine is annually reflected at this gathering, so that each session marks a definite point in the advances toward the conquest of diseases. Many workers reserve their announcements of progress in the solution of problems concerning etiology, treatment and prevention of diseases until the annual session of this great body, knowing that they will have a large audience and a discriminating discussion. The growth of the association both in number and in influence has been noteworthy. The attendance at the annual meetings is so large that the city which undertakes to entertain the association must possess unusual facilities for meeting halls and hotel capacity for Fellows and guests.

Atlantic City is preeminently a convention city, and every one will find comfortable accommodations. The late date in June will undoubtedly insure fine weather conditions and summer attractions. Missouri should be adequately represented at this session, and we hope a large number of our members will attend.

VOLUME X

With this issue we complete the tenth volume of *THE JOURNAL*. We take advantage of this occasion to express our thanks to all our members for their courtesy, interest and cooperation, and extend our sincere gratitude to the members who have given us their assistance in various departments of *THE JOURNAL* during the past twelve months. We also extend our thanks to the members who have contributed original articles for publication, and we hope there will be many additions to this list of the friends of *THE JOURNAL*. We are under special obligations to the county secretaries and reporters for their faithful attention to reporting the proceedings of their societies for publication in *THE JOURNAL* and for their unstinted cooperation in many other ways to make *THE JOURNAL* a medium of communication between the members. We appeal to all members to give their continued support and personal interest during the coming twelve months so that *THE JOURNAL* may be made more readable and more interesting and valuable to the organization.

"THE UNITED DOCTORS" AGAIN

"The United Doctors" fakers met another defeat in their attempt to mulct the people when several physicians of Dexter, Stoddard County, invoked the assistance of the county attorney and had the "doctor" arrested and tried. He was fined \$50 and after languishing in jail for four days finally obtained the money to pay his fine and skipped out.

When the advertisement of the united doctors appeared in the Dexter papers, Dr. F. E. Walters of that city wrote to the secretary for information, and on the advice given proceeded to arrest the person in charge on his appearance in Dexter, for practicing medicine without a license. The "doctor" gave his name as S. C. Higgins. He is said to be a pronounced drug habitué. He is known in other parts of the state and will probably turn up again. He should be arrested wherever he appears and made to show his right to practice.

We are glad to see our members taking active steps to prosecute these fakers and law-breakers. Prosecuting attorneys and county courts are rapidly learning that it is inimical to the best interests of the community to allow this class of itinerants to ply their trade and will respond to the requests of the reputable medical men to prosecute all who do not comply with the law. A strong effort should be made by our members to induce the county newspapers to refuse the advertisements of these people. That is the surest preventive.

HE WANTS THE STATE JOURNAL

Having received a notice from the postmaster that Dr. J. I. A. had ordered *THE STATE JOURNAL* stopped, we wrote the doctor to ascertain if this was his wish, believing that it must be a mistake on the part of the postmaster. We received the following reply:

Dear Doctor: Your inquiry in regard to my stopping the *STATE JOURNAL*, at hand. There is some mistake. I have been trying for a year or more to stop the ———— and I suppose the error arose through my trying to stop it. I don't think the time will ever come when I will voluntarily sever my connection with the medical societies to which I belong. Continue to send *THE JOURNAL*.

Yours fraternally,

J. I. A.

We have yet to receive a single stop order from any of our members or readers.

PURE ADVERTISING LAW FOR
ST. LOUIS

Mayor Keil of St. Louis signed the pure advertising bill passed by the General Assembly last month. The bill was opposed by various commercial interests although few persons were willing to appear before the committee of the General Assembly and voice their opposition. The publisher of a medical journal which carries many advertisements condemned by the American Medical Association, vigorously opposed the bill, and some retail merchants, we understand, made objection. The *New St. Louis Star*, which recently distinguished itself by exposing the fraudulent practices of medical quacks and sought and obtained the cooperation of the St. Louis Medical Society in this campaign, surprised the medical profession and other friends of the advertising bill by denouncing the measure editorially as being too drastic, although at the same time declaring the *Star* was in favor of a "reasonable" bill. This law will prevent the very character of advertising which the *Star* denounced in its fight on quackery. The fight on the bill centered on the word "misleading," which objectors declared was too vague and the *Star* said would invite blackmailing schemes. The experience, however, of other cities where the same kind of law is in force does not justify such an assumption.

The very first form of deceptive advertising that should feel the force of this law is medical advertising, as it is in this field that frauds are most frequent and least discoverable. We understand the establishment of this law has already influenced one perniciously deceptive advertiser to such an extent that he is trying to dispose of his business. The public would be the gainer if he does so.

The measure was introduced by Dr. Paul R. Fletcher, a member of the city council. Its terms are broad and cover all sorts of advertising by circulars, billboards, hand-bills, in newspapers or other forms of advertising. The full text of the law is published on another page in this issue.

SOCIAL HYGIENE

Five years ago more than one hundred physicians, ministers, lawyers, teachers, business men, and other leaders of civic life in St. Louis signed a call for a meeting to devise some means of combating venereal disease. This meeting was held in the auditorium of the St. Louis Medical Society on Jan. 25, 1909, and resulted in the formation of the St. Louis Society of Sanitary and Moral Prophylaxis, which later changed its name to the Society of Social Hygiene.

It being the opinion of the medical men concerned that this movement should be a community affair and that all classes should participate in it, the executive committee was made up of ministers, teachers, lawyers and business men as well as physicians.

As the work proceeded it soon became clear that education is the key to the situation. Wise legal or administrative measures cannot be devised nor carried out until the general ignorance and misinformation are replaced by sound knowledge and an enlightened public opinion developed. Prevention by education goes to the root of the matter. The efforts of the society are chiefly along the following lines:

1. Parents are urged to instruct their children with regard to sex. They are to use such tact and good sense as they can muster, but they must give the instruction early enough to anticipate the impure sources of information. If such instruction is given before the subject acquires unclean associations in the mind and before the sex instincts awaken, the curiosity which leads to dirty talk is allayed. The society's lecturers are kept busy addressing fathers' and mothers' clubs, parent-teachers' associations, etc., on the problems arising in connection with this work.

2. An effort is made to reach the older boys and girls through such organizations as the Boy Scouts, Camp Fire Girls, the Y. M. C. A. and Y. W. C. A., the Turner societies, Sunday-school classes, etc. In this teaching the biological, pathological and ethical instruction is given in various combinations according to circumstances, and ancient and injurious notions, such as the doctrine of physical necessity for men, are combated.

3. Inasmuch as many children have very ignorant or careless parents or guardians they must be reached in some other way. Some are urging that sex instruction be given in the pub-

lic schools. The executive committee, however, feels that such an attempt at present would be premature and might lead to a reaction. The pedagogical methods have not been worked out and public opinion is not yet prepared to support such a movement.

4. One of the greatest tasks undertaken by the society is that of changing the mental and emotional attitude of the adult part of the population concerning the peril from venereal disease. Until recently, gonococcus infection was not considered the serious disease it is now known to be. What this and syphilis really are, what the sequelae of each are liable to be, both for men and for women, the society would make matters of common knowledge. Since most prostitutes, public and clandestine, are diseased a part of the time and some of them all the time, the danger of exposure is by no means slight. Furthermore, and great stress is laid on this, the effort is made to have every young man and woman understand that these diseases are often latent when apparently cured, and that no one who has been infected should think of marriage without explicit consent of a competent physician. This propaganda is having an effect. Increasing numbers of young men are consulting physicians, that they may be assured they are not germ carriers, and so may avoid the agony of suspense when their children are born.

5. Parents and guardians of young women are asked to be sure that accepted suitors can present a clean bill of health. The society has not asked that the state enact a law on this subject, since it is in the power of parents and of enlightened young women to protect themselves.

The committee has conducted a campaign of enlightenment. It has endeavored to be at once enterprising, sane and wise. It does not admit sex cranks to membership in the society, and it endeavors to avoid association with extremists of any kind. Now that the subject is opened up, many are writing and saying foolish things. With them this society has nothing to do, and it hopes the public will discriminate so that it may not be involved in the general reaction which the excesses and follies of extremists are sure to engender.

It is easier to start such movements than to carry them to a successful end. Physicians ought to give the Society of Social Hygiene their active cooperation. They can help by becoming members, by giving it their moral support, by counsel and advice, by giving lectures when asked to do so by the executive committee. Inasmuch as it is impossible for the officers of the society to visit each of the hundreds of physicians in St. Louis, the president has recently appealed to them by letter for their continued interest, their suggestions and active cooperation. He surely will not fail to receive a cordial response.

CYSTOGEN

At a meeting of physicians recently, the question was asked: Why is Cystogen, which is just plain hexamethylenamin, not recognized by the Council on Pharmacy and Chemistry?

The answer is simple: Because the therapeutically suggestive title as well as the method of exploitation encourage its indiscriminate and ill-advised use, both by the medical profession and the public.

If a physician will go to a drug store and ask to see a package of Cystogen, the pharmacist will probably ask: Do you mean Cystogen-Lithia or Cystogen Aperient? If he asks to be shown Cystogen itself, the pharmacist may hand him a small box containing twenty-five Cystogen tablets, put up in a way to appeal to the public. If the physician by this time has become somewhat curious and examines Cystogen-Lithia and Cystogen Aperient, he will find that these also are put up in a way to encourage their use by the public.

But most objectionable of all, on examining the Cystogen literature he will find that this is written in a way to lead easy-going physicians to use it without due regard to the needs of their patient. If physicians take any stock in the Cystogen Company's "literature"—and it is written in a way to gain the confidence of the unwary—they are likely to conclude that one or the other of the Cystogen preparations is indicated in almost every disorder to which the human body is subject. In other words, the use of Cystogen preparations tends to block medical advance.

NEWS NOTES

DR. H. S. CROSSEN of St. Louis delivered an address on the "Treatment of Severe Prolapsus Uteri," before the Greene County Medical Society at Springfield, May 8.

DR. NATHANIEL ALLISON of St. Louis attended the meeting of the Macon County Medical Society May 7, and demonstrated a number of patients at an orthopedic clinic.

DR. W. L. RODMAN of Philadelphia was a guest of the St. Louis Medical Society, May 2, and addressed the members on the subject of "The Cancer Prevention and Control of Cancer."

A HOME for the nurses of the Barnes group of hospitals at St. Louis will be erected on ground adjoining the Children's Hospital. The building will cost \$150,000 and will accommodate 150 nurses.

DR. JABEZ N. JACKSON of Kansas City will attend the Clinical Congress in London in July. He will sail June 13 and spend a month on the Continent, then visit the London and other English clinics.

DR. BRANSFORD LEWIS of St. Louis addressed the St. Joseph-Buchanan-Andrew Medical Society at St. Joseph on May 6, his subject being "Review of Genito-Urinary Diagnosis, Pathology and Therapy," illustrated with lantern slides.

THE board of health and the mayor of Joplin, in conjunction with the Commercial Club, recently disapproved plans for conducting a clean-up campaign and the introduction of new measures to promote sanitation and the public health.

DR. CARL A. POWELL, a junior intern at the City Hospital in St. Louis, fell down several steps when the heel came off his shoe as he was descending recently. He suffered a laceration and fracture of the right arm which became septic, leaving him in a serious condition.

SANITARY inspectors have been reinstated by the board of health of Kansas City and fourteen men are now at work. A new appropriation for the board made possible the restoration of sanitary inspectors and an increase in the number sufficient, the board hopes, to cope successfully with sanitary conditions during the summer.

THE American Society for the Control of Cancer held a public meeting in St. Louis, May 1. The principal speakers were Dr. William L. Rodman of Philadelphia and Mr. Frederick L. Hoffmann of New York. The St. Louis Medical Society, the Civic League and the Wednesday Club cooperated in bringing the meeting to the attention of the public.

MR. PATRICK F. COOK, the assistant editor of a lumber trade publication, has been appointed a member of the hospital board of St. Louis. He will fill the place of Mr. Benjamin F. Gray whose term expired. Mr. Emile N. Tolkaacz and Mr. Edward A. Gessler were reappointed. The board is composed of seven members including the mayor, and numbers among them one physician, a homeopath.

HANNIBAL has begun a clean-up campaign and will start by employing an inspector to visit the premises of all citizens to ascertain the sanitary condition of yards, alleys and vacant lots. Prosecutions will follow failure to put premises in a sanitary condition. A week will be devoted to cleaning up and the city will furnish wagons to carry off the rubbish after which premises must be kept in a sanitary condition.

THE School of Medicine of the University of Missouri will establish a new department to be known as the Department of Clinical Medicine and Surgery, beginning with the fall session. The purpose of this department is to give the second year students instruction in physical diagnosis, minor surgery and bandaging. Dr. Woodson Moss and Dr. Guy L. Noyes of the faculty and Dr. Max W. Myer of St. Louis have been appointed to the staff. Dr. Myer will take up his residence in Columbia at once.

SOMETIME ago the board of managers of State Hospital No. 2 at St. Joseph elected a superintendent to take the place of Dr. A. C. Pettijohn whose term does not expire until June 1. Objection was raised to this precipitate action and the new superintendent did not seek to enter on his duties. It is now said the board will again go through the formality of electing the superintendent at its meeting in June. Dr. George R. Thompson of St. Joseph will probably be elected.

THE National Biscuit Company at Kansas City has employed a physician to examine all the employees of the company with the view of maintaining a high standard of healthfulness in the 600 persons employed in that plant, and to examine the physical condition of all new applicants for positions. It is said this company tried the method in New York and was so well pleased with the improved health conditions among the employees in cleanliness and in the sanitary care of all food stuffs handled by the workers, that they will introduce the system in all their eight-
 eeen plants.

At the meeting of the American Medical Association to be held in Atlantic City, June 22 to 26, the H. K. Mulford Company will exhibit motion picture films showing the different processes employed in the production of biological products. Not only do the films show the laboratory methods used but also the actual application of these preparations from the clinician's standpoint. These films will be exhibited several times each day in the auditorium of the Chalfonte Hotel and arrangements made that will not conflict with the general or special sessions of the meeting. A visit to the Mulford laboratories at Glenolden will repay every physician who can spare the time for the short trip.

"THIS is Kansas City's cleanest year" is what the health commissioner of that city, Dr. W. S. Wheeler, says in the *Kansas City Times*. The most stimulating encouragement a health officer can receive is to have the people respond cheerfully and effectively to the orders and directions of the board of health for cleaning up premises

and public places. It was this sort of cooperation on the part of the people that made it possible for the health commissioner to declare that Kansas City is cleaner this year than it has ever been. The Boy Scouts demonstrated their usefulness in this kind of work by serving as "advance agents" of the board and notifying property owners and families of the board's orders. They discharged their duties in a commendable manner and earned the board's thanks as well as saving the city considerable money in salaries.

It is said the Kansas State Medical Society at its recent meeting in Wichita refused to adopt certain resolutions condemning fee-splitting among its members. It is inconceivable that the majority of the members of the Kansas Association support this disgraceful practice, but the action of the state association leaves a blot on the honor and dignity of the entire profession of the state. It is well known that the practice is very prevalent in our sister state and Missouri is badly infected with the canker, but an amendment to the by-laws adopted in 1913 in Missouri is exercising a very restraining influence on offenders. The public will not long tolerate this unscrupulous practice and the sooner the physicians of Kansas and of all other states realize their whole duty and perform it conscientiously by driving the offenders beyond the pale of reputability, the sooner will this stain on the honor and integrity of a noble profession be removed.

Since publication of *New and Nonofficial Remedies, 1914*, the following articles have been accepted for inclusion with "N. N. R." Those accepted during the current month are made prominent by the use of italics:

Normal Horse Serum; Typhoid Vaccine. Immunizing (H. M. Alexander and Co.).

Causticks; *Caustick Applicators*; *Cupricsticks*; *Stypsticks* (Antiseptic Supply Co.).

B. B. Culture (B. B. Culture Laboratory).

Amphotropin; *Erepton* (Farbwerke Hoechst Co.).

Trypsin (Fairchild Bros. and Foster).

Thiocol; Syrup Thiocol. Roche; *Thiocol Tablets* (Hoffmann-LaRoche Chemical Works).

Phenolsulphonephthalein, H. W. and Co.; Phenolsulphonephthalein Ampules, H. W. and Co. (Hynson, Westcott and Co.).

Cerolin (Merck and Co.).

Acne Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; *Coli Serobacterin*; Disinfectant Krelon, Mulford; *Neisser Serobacterin*; *Pneumo Serobacterin*; *Salicylos*; *Scarlatina Strepto Serobacterin*; *Staphylo-Serobacterin*; *Staphylo Acne Serobacterin*; *Strepto-Serobacterin*; *Typho-Serobacterin* (H. K. Mulford Co.).

New Bornyval (Riedel and Co.).

Phenolphthalein Agar (Reinschild Chemical Co.).

Sodium Biphosphate, Squibb; Tetanus Anti-toxin, Squibb (E. R. Squibb and Sons).

Freemann's Russian Mineral Oil (Aseptic Chemical Co. Having been found to comply in all respects with the requirements of the U. S. Pharmacopoeia for liquid petrolatum, and not being in conflict with the rules, the Council held Freemann's Russian Mineral Oil an official article not requiring admission to New and Nonofficial Remedies.

MEMBERSHIP CHANGES, APRIL

NEW MEMBERS

Abbott, J. W., Goldsberry.
 Broemser, M. A., Webster Groves.
 Bullock, E. H., Edina.
 Busard, Clifford F., St. Louis.
 Cleveland, A. H., St. Louis.
 Conrad, Adolph H., St. Louis.
 Dean, J. Wilson, Centaur.
 Eskew, DeWitt, Poplar Bluff.
 Findley, Thos. A., Leesville.
 Freeland, P. L., Purdy.
 Frein, Harry J., Springfield.
 Gilpin, George, Stoutsville.
 Haden, John W., Plevna.
 Hamlin, Jos. R., LaGrange.
 Harmon, Leo D., Forbes.
 Henderson, R. C., Kansas City.
 Humphrey, Benj. F., Hurdland.
 Keaney, James, Edina.
 Kilian, Leo J., St. Louis.
 Kelly, Benj. B., Purdy.
 Klippel, Bernhard Wm., St. Louis.
 Knabb, Frank P., Valley Park.
 Kopelowitz, Jonas C., St. Louis.
 Lissner, Hans, St. Louis.
 McDermott, Jos. L., Kansas City.
 McGhee, J. L., Williamsville.
 Michie, Thos. A., Tyler.
 Mercer, Ray, Canton.
 McReynolds, Robert, Knox City.
 McReynolds, Uriel R., Knox City.
 Nunn, John C., Maywood.
 Sharp, Isaac F., Cottonwood.
 Skinner, Phineas, St. Joseph.
 Van Raalte, Martin, St. Louis.
 Snedee, Jos. F., St. Louis.

CHANGES OF ADDRESS

Biggs, M. O., Bowling Green to Fulton.
 Babcock, Bert Wm., Fortescue to New Point.
 Cole, Paul F., Steffenville to Ewing.
 Coleman, W. C., Nashville to Mindenmines.
 Crump, A., Hunt to Broseley.

Gehrunge, E. C., St. Louis to New York City.
 Hanna, Thos. J., Bolekow to Dwyer.
 Hallam, John C., St. Louis to Centralia, Ill.
 Kearney, Elmer, New Point to St. Joseph.
 Moore, W. A., Montevallo to St. Joseph.
 Peck, J. H., Chillicothe to Mooresville.
 Patrick, Philip L., Bucklin to New Cambria.
 Prichard, John A., Lackland to Overland.
 Sheldon, S., Columbia to Kansas City.
 Sneed, C. M., Jefferson City to Columbia.
 Watkins, Geo. L., Bonne Terre to Farmington.
 Whitt, W. A., Gazette to Winfield.

REINSTATED

Bailey, W. T., Cassville, Barry County.
 Dunlop, Harry E., Canton, Lewis County.

MEMBERS DROPPED

Hattler, Wm. L., Barnett (resigned).
 McKelvey, W. A., Opolis, Kan.
 McClure, G. W., Carterville.
 Pierson, Percy R., St. Louis (resigned).
 Richards, Thos. C., Fayette.

DECEASED

Dudley, Geo. F., St. Louis, Feb. 2, 1914.
 Loftus, Wm. V., St. Louis, March 13, 1914

CORRESPONDENCE

MEDICOLEGAL BUREAU

To the Editor: The Council on Health and Public Instruction of the American Medical Association has established a medicolegal bureau for the purpose of collecting, arranging and studying all of the available material bearing on medicolegal questions of interest to physicians, or relating to public health matters. This bureau is in charge of Mr. John D. Hubbard, a graduate of the Northwestern University School of Law. We desire to secure all available material bearing on medicolegal subjects, especially all pamphlets, bulletins, monographs, circulars, legislative bills, laws, reports or special articles on any medicolegal or public health topics. As rapidly as material can be secured and studied, we hope to furnish information to all those interested on any topic coming within the range of the bureau. We shall greatly appreciate it if you will kindly send us, at any time, any such material that may come into your hands. This will be properly classified, cataloged and preserved for use in answering inquiries on any medicolegal question. We hope to make this bureau of service to the officers and members of state associations, executive officers of state boards of health and medical examining boards and any others interested. Any assistance or contributions will be appreciated.

and of great assistance in carrying out the plans of the bureau.

With cordial thanks for your many courtesies in the past, and hoping that we may, through this bureau, be of some assistance to you in the future, we remain,

Very truly yours,

FREDERICK R. GREEN,

Secretary Council on Health and Public Inst.

[We publish the above letter so that members may become familiar with this new service established by the American Medical Association and cooperate with the State Medical Association officers and the A. M. A. as far as possible. Information may be sent direct to the Secretary of the Council on Health and Public Instruction at Chicago, or to the Secretary of the Missouri State Medical Association at St. Louis.—Ed.]

MISCELLANY

CONTRACT MEDICAL PRACTICE

Pharmacy and medicine can meet on a common ground of opposition to the practice of medicine on the contract system—and the public health will gain by their cooperation. There is, indeed, much about the contract system to appeal to the great unthinking majority of the public and there is, of course, a few pennies of profit to attract the penurious physician. Not usually, however, does he see a direct profit in offering his professional (?) services far and wide at the munificent rate of twenty-five cents a week for each person—small children admitted free as an inducement—but he can see in the distance opportunities to dwell upon the peculiar nature of the ailment of a payer of the quarter and the necessity for elaborate and expensive treatment under a system which his studies in Patagonia or Dahomey have enabled him to apply with every assurance of success.

It was once the common practice of the dolorless dental drawingrooms to keep a bin of made-up molars to cover their advertised "full set of teeth for \$4.96." When a bargain-hunting toothless one wandered into the pavilion of painless pulling, he was led up to the bin, and half a dozen or more specimens of apprentice work in dental schools were dropped or jammed one by one into his buccal cavity, there to roll about like a pumpkin in a wagon or to distend his jowls like an attack of infectious paratoiditis—and he (more or less) gladly paid \$8.63 for a real custom-made set of grinders fitted to his "peculiar osseous formation of the maxillaries."

Just so it is in the case of the quarter-a-week patient. As long as two cents' worth of tablet triturates suffice to make him believe he is not ill, his quarter is welcome. But when he gets the rheumatism and the wife has the quinsy and three youngsters are measles-spotted, the family contribution to the medical relief fund is too closely approached by the doctor's street-car fare and special treatment is indicated. Oh, 'tis a gladsome fooling of the public from both ends—and a squeezing of honest medicine and pharmacy in the middle.

Physicians know full well the evils of contract practice; but, like pharmacists, they hesitate to shake out the moths from the cloak of their calling before the public gaze. They are quite willing, however, to dwell upon the pharmaceal phase of the evil in their

conversations with patients; and pharmacists can touch gently but convincingly upon the medical phase in their daily dialogues across the counter. Thus will good come to each calling through the offices of the other.—*Journal N. A. R. D.*

ECONOMY FILLS A HOSPITAL

The increase in the number of infectious diseases since the city discharged its physicians to save money was shown to-day when it became known that the isolation wards at the General Hospital were full of persons afflicted with small-pox, diphtheria and other contagious diseases. There were 280 persons at the General Hospital yesterday, fifty-six of whom were small-pox patients. Other infectious diseases are there in corresponding numbers as the direct result of the cutting off of the city's health inspectors.

Formerly, with the city physicians making regular inspections, the number of small-pox patients rarely went above twelve or thirteen.

Here is how the boss administration saves (?) the taxpayers' money. The increase in food supplies for March over February, 1914, are as follows: Milk, 260 gallons; bread, 678 pounds; butter, 47 pounds; sugar, 106 pounds; eggs, 95 dozen. Physicians at the General Hospital admitted this morning that this increase was caused by the large number of patients cared for who are suffering from infectious diseases.

"The city is full of it," one physician said. "This morning I was asked to go out to a certain home for children and vaccinate the patients there. The children are suffering from both small-pox and diphtheria. Two of them were brought here last night, and I don't know what to do with them. One has been exposed to small-pox and now has diphtheria. The other has diphtheria and has been exposed to small-pox. The only thing I can do is to vaccinate against both diseases."—*Kansas City Star.*

HABIT-FORMING DRUGS AGAIN

Retail druggists have been protesting because in a recent paragraph we declared that some of them sell habit-forming drugs illegally. "Is it fair," ask the druggists of Pittsfield, Mass., "to praise a firm at the expense of others for obeying the law?" All firms and all druggists are alike to us. The firm we praised for announcing that it would not sell drugs except by prescription of the family doctor is no dearer to us than the druggists of Pittsfield or of Wilkes-Barre. We know that "druggists as a class are workers for the public good." So are physicians. Yet we may condemn Dr. John J. Van Horn of New York, convicted April 8 for selling morphin illicitly, without stigma on the rest of the medical profession. Do the pharmacists for a moment maintain that they have no black sheep in their fold? Charles B. Towns found that even among the best-known of the wholesalers methods were so lax that he could obtain without the slightest difficulty quantities of drugs by simply sending his order signed with the name of a non-existent physician. No question was raised; evidently not even a directory was opened before filling the orders. Let but the druggists scrutinize carefully all drug prescriptions; let them demand stringent registration laws, careful government oversight; let them, in short, purge themselves of those who traffic in darkness and ruin for untold thousands of people, and we shall be the first to praise them. Our chief object in the paragraph they disliked so much was to stir up precisely the interest of self-purification that we seem in a measure to have succeeded in arousing.—*Collier's Weekly.*

WARNING AGAINST A PRESCRIPTION FRAUD

WASHINGTON, D. C.

The Department of Agriculture, under the Food and Drugs Act has recently been investigating a new trick of certain patent-medicine and proprietary-medicine vendors which it is believed is deceiving a large number of people into spending money for patent-medicines under the impression that they are getting regular physicians' prescriptions for nothing.

In a number of publications the department finds advertisements are appearing which state that the man or woman whose name is attached was saved from death from one of a number of serious diseases through some wonderful prescription given to him or her by a regular physician of unusual skill who will not allow his name to be used because of medical ethics. The advertisement states that the writer feels it to be a duty to communicate this invaluable recipe to humanity in order to save them from similar ills. The offer is then made to supply this prescription without charge to any one who will address a post card to the advertiser. People who do not stop to wonder who is to pay for the advertisement and the return postage and writing of the prescription are caught by this fraud and ask for the prescription. In due course a regular prescription is returned. This contains a number of ordinary ingredients and then under a technical name will call for a large proportion of some patent medicine or proprietary drug. The recipient takes this to a drug store to be filled and the druggist finds that he has to buy some of this patent preparation in order to fill it. He therefore has to order a large package or bottle of it and to make a profit must charge the customer a good, stiff price for filling the prescription. The customer, of course, gets what is in effect simply a patent-medicine which, save that it bears a druggist's label and a prescription number, is the same as a patent medicine sold under the maker's own label and in the maker's own bottle.

The government can not reach these people under either the Food and Drugs Act or the postal laws, because the scheme is so planned as to evade government laws. The deception and misrepresentation appears in advertisements, circulars, letters, etc., separate from the package and the medicines are seldom sent through the mails. The best the department can do, therefore, is to warn the people to be particularly suspicious of those who spend money for advertising space, postage, and letter writing, seemingly out of their love for humanity. In all of these cases there is a profit-making scheme back of the seeming philanthropy.

THE FEE-SPLITTING FRAUD

The Kansas State Medical Association, in refusing to condemn fee-splitting, has formally indorsed a medical fraud very common in that and other states.

The fraud is this: The surgeon charges a double fee for performing an operation, and secretly divides the fee with the family physician. It is well known in inner circles that secret fee-splitting is almost universal in Kansas, and the state association, by refusing to condemn the practice, in effect admits and justifies it. The surgeon gives the family doctor, who brings in the business, 50 per cent. of the fee. Sometimes the per cent. is 75. If the patient, or the family of the patient, were informed of the fact in advance of the operation, or even after it, there would be no fraud about it; but the secret splitting of fees is grossly immoral. The patient clearly is deceived. Ordinarily he reasons to himself: "My dear family doctor certainly would not recommend this operation unless he was sure it was necessary; there is nothing

in it for him. He would certainly have it done at the lowest possible cost; there is nothing in it for him." It is a flagrant fraud practiced on patients and families at a time when, often in the shadow of death, they are in no frame of mind to defend themselves.

Not only this, but the practice is a constant temptation to the family doctor to recommend operations when operations are unnecessary. He says to himself, when he yields to the temptation: "Here is Smith; he can pay, within a year or two, \$1,000; half of that will come to me. He thinks there is something the matter with his appendix; maybe there is. I guess I'll recommend an operation; that will pay half the mortgage on my little home. I have to work awfully hard, anyhow." That \$500, or part of it, at least, is velvet; it is graft.

The family doctor is entitled to something more than \$3 a visit in case of an operation; a skillful diagnosis is worth money; the responsibility assumed calls for compensation. But the family doctor should make his bill and the surgeon his. Secret fee-splitting is fraud.

Here is opportunity for real reform by legislation. In England, we understand, surgeons' fees—the fees collectable by law—are regulated. Those who are able to pay may pay as much as they like, through gratitude.

The doctors are before the legislatures asking protection against quacks nearly all the time. If they are given a sort of monopoly, they should be regulated.

Another way of reaching the evil would be to require all surgeons to make an annual report, under oath, giving the name of patients operated on, the amount of the fee charged, and the division, if any, made thereof.

Fee-splitting appears to be almost universal in Kansas. The Kansas legislature might well begin the reform. The practice, however, is not confined to Kansas. It prevails in other states also, and is not unknown in Missouri.

WELCOME!

We denounce advertisements of medical fakes so often that it is pleasant now and then to speak kind words. In the *Bloomington (Wis.) Record* we read this editorial announcement:

"The *Record* has occasionally accepted the advertisements of traveling 'quack' physicians, but we have decided to cut out this sort of business. The rates on this class of advertising are high and the pay has been prompt, but we have come to the conclusion that we have no right to put such advertising before our readers, as we believe too many of the advertisers are fakes pure and simple. When you need medical advice, consult a reputable home physician; if they cannot help you, they will send you to some one who can."

Good for the *Record* and for its editor-proprietor, A. C. Bishop! We hope that Mr. Bishop's next move will be to cut out the advertisements of Lydia E. Pinkham's "Vegetable Compound" and Mother Gray's "Sweet Powders for Children," and other tainted advertisements. Squeamishness about "ads" is an increasingly popular trait among newspaper publishers. It pays to be good.—*Collier's Weekly*.

HOW NOT TO DIAGNOSE

The *Medical Council*, with advertising pages stained with copy of Pepto-Mangan, Prunoids, Anasarcin, Campho-Phenique, Burnham's Soluble Iodine and other equally as undesirable and unreliable advertising matter, announces in its April number that it is going to

make a "diagnosis of the unrest and agitation that is disturbing the medical profession." The editor proposes to reach such a diagnosis by making a series of hurried visits to several localities and to sum up his conclusions from the observations he thus makes, and thereby hopes to attain a final conclusive opinion as to "what's wrong."

Incidentally it is stated that the editor has done considerable traveling in sanitary investigations. This is the first intimation that we have received that the cause of unrest was due to "inefficient sanitation" and that a sanitary expert's services were required to propound a solution of the difficulty.

In the same issue the visit to New York is described. The description commences with a criticism of the Council on Pharmacy and Chemistry of the A. M. A.; recapitulates the tale of woe of several pharmaceutical manufacturers who do the "sob-act" because the Council on Pharmacy and Chemistry has compelled them to be honest in regard to their manufactured products and who bemoan the fate that has thus befallen them. A few generalities are indulged in in discussing the National Formula Propaganda, Hospital and Dispensary Abuses; twelve lines are devoted to Sanitation, a column on New York physicians, which does not reveal any unknown traits, and a quarter of a column of business comment with a closing statement that *The Council* has a large list of subscribers in New York.

When we commenced to read this article we thought that there was about to be revealed to us an inside view of the metropolitan profession, its foibles, weaknesses, scandals, as well as a word picture of its better qualities and the underlying cause that produced each condition. Yes, we have been disappointed for we failed to find any comment as to the cause of "unrest" in the profession and note that the only "unrest" that existed occurred in the manufacturer's domain. A similar article pertaining to other districts to be visited will cause us to feel that the end sought will not be attained—except probably in the Chicago Medical Society.

If our contemporary would only pluck the beam out of his own eye it might be able to observe some of the causes for "unrest" in its very pages, and, seeing, we hope that he will cleanse them from much that has been demonstrated unclean. By so doing he will have taken a long step toward pouring oil upon the troubled waters of a profession that cannot help but be restless under the conditions that govern many medical publications. It makes us restless to think that a publication can try to "get away" with such "rot" and in the disguise of a would-be reformer, play to the galleries where sit the spectators already wearied from observing misbranded reform propagandas emanating from those who are still "unclean."—*Jour. Mich. State Med. Assn.*

HOW TO SAVE LIVES

Here are a few facts about the central and most densely populated part of St. Louis which ought to interest the West End, the South Side and people in the northern part of the city immensely.

In the central region indicated are twenty-six public schools. They are peculiarly liable to epidemics of contagious disease, because the pupils who attend the most of them come from crowded homes, where sanitary precautions are all but impossible, while personal contact between the sick and the well is closest. As a matter of fact, contagious diseases are common in the district.

But, strange to say, this region has not originated a single school epidemic this year.

All of the school epidemics, including the present epidemic of diphtheria in Rose Fanning school, have appeared in the more prosperous, the more cleanly and more sanitary parts of the city.

The region in which there have been no epidemics is the region in which the sanitary division of the schools make regular inspections through its salaried physicians.

The schools outside of this inspected district are compelled to take chances with communicable diseases, and when there is an outbreak the Board of Health comes running out to lock the barn after the horse is stolen. This is no fault of the board. It has too few men to cover the city, or is it the fault of the sanitary division, which has five men at work covering the twenty-six ordinary schools, and in addition to them thirteen special schools. They have all they can do with that work.

Isn't it about time the rest of the city demanded as much protection for their children as the congested district gets? The results of regular inspection downtown are so impressive as to leave no reasonable doubt as to its value. It saves the time of the children, saves their health and saves their lives.

Parents of school children in the uninspected districts will do well to think this matter over and then to speak their minds to the Board of Education.—*St. Louis Republic.*

JUDGE BREGY'S VIVISECTION RULING UNTEXABLE

In the editorial article published in our issue for April 25 on the Philadelphia vivisection trial in which six distinguished members of the medical faculty of the University of Pennsylvania were accused, we held that a calm analysis of Judge Bregy's ruling that the law of Pennsylvania did not allow pain to be inflicted upon any animal for any other purpose than to relieve suffering in the animal itself, would show that such an interpretation could not be sustained by higher tribunals. Our conclusion was based on the fact that Judge Bregy endowed the law with a degree of comprehensiveness which it had never been intended to possess, the sacrifice of animals used as food, dress or ornamentation, or for sporting purposes, for instance, being in no way interpretable in the light of an effort to relieve the animal itself of suffering. Since the editorial article was written, legal authorities have independently adopted precisely the same line of argument to indicate that Judge Bregy's ruling would doubtless be overruled. Quoting a decision of the Supreme Court in the case of *Commonwealth versus Lewis*, 140 Pennsylvania, 261, for example, Samuel Dickson, Esq., wrote in a letter to Provost Smith of the University of Pennsylvania: "The gelding of calves, colts, cats, dogs and chickens has been in common use from time immemorial. Fishermen have played with game fish upon the hook almost by the hour, and in the case of the tarpon, for several hours, without intending to use the fish for food; birds and animals have been trapped or wounded by sportsmen and have suffered day after day in pain, and, indeed, the butcher does not kill animals for food for the relief of the suffering of the animal itself."

Bearing directly on the question in point was the view of the late Chief Justice Paxson, quoted by the same authority, that there is no violation of the law where the injury is inflicted for a lawful purpose in virtue of the act of June 3, 1911, which authorizes the search of any building where it is believed that an act of cruelty to animals is being perpetrated. It is specifically provided, moreover, that "no search-warrant shall be issued, under the provision of this

act, which shall authorize any officer, policeman, constable, agent of a society, or other person to enter on or search premises where scientific research work is being conducted by or under the supervision of graduates of reputable scientific schools, or where biological products are being produced for the cure or prevention of disease."

Judge Bregy's ruling, if sound, would have done incalculable harm to progressive medicine and have served to perpetuate suffering in many directions by affecting to a greater or less extent all institutions of medical learning in Pennsylvania. Indeed, as did the plague—before it had been mastered by the benefactors of humanity whose labors it is the purpose of the antivivisectionists wantonly to destroy—its evil influence would soon have spread broadcast, and particularly to the many states provided with just laws against "any person who should wantonly or cruelly maltreat, beat, or otherwise abuse any animal or animals belonging either to himself or others." But the salient and ever-present defect of the antivivisectionists' misinterpretation came to the fore in the present instance, "owing," it is said, "to the hurry of a jury trial which did not permit of exhaustive argument" and, we would add, of adequate search for precedents, a defect sufficient to mislead even a learned and justly respected magistrate. Fortunately, his ruling is not only indefensible, but it will have served greatly to advance the cause of animal experimentation by emphasizing its true worth to mankind.—*New York Med. Jour.*

SOMEBODY SHOULD COUNT OUR BABIES

In the *May Woman's Home Companion* Miss Julia C. Lathrop, chief of the Children's Bureau in the United States Department of Labor, writes an interesting article entitled, "The Safeguarding of the Child"—full of new facts and ideas. She goes on to show that if the waste of infant life is to be diminished, doctors and nurses must get in touch with the children and their mothers at the earliest possible moment after birth. Nothing, it is said, has done so much toward lessening infant mortality in England as a law now rigidly enforced in that country which requires the registration of all births within thirty-six hours. In the following extract from Miss Lathrop's article appears a statement of an amazing condition of affairs in the United States:

"Unfortunately we have in the United States no adequate laws to cover the entire country, compelling the registration of births. In only eight of the states—the New England States, Pennsylvania, and Michigan—are birth records kept in such a way as to meet the requirements of the Census Bureau, and even in those states not all of the births are registered.

"No immigrant can enter this country without the making of a record of his or her sex, age, and nationality; but the nation keeps no books to show how many children enter the United States by birth. Nobody knows how many babies are born in the United States, or where they are born. The importance of putting down a baby's birth in the public records is a new idea to people in this country—whereas in European lands such records have long been kept most painstakingly."

Miss Lathrop shows how the whole civilized world has suddenly awakened to the fact that there is going on everywhere a great waste of infant life. The estimate of the Federal Census authorities is that we lose at least 300,000 babies every year before they have reached the age of one year—more than a third of them before they are a month old. Miss Lathrop goes on in part as follows:

"Dr. J. W. Schereschewsky, of the Public Health Service, in a recent address said: 'The mere business of being a baby must be classified as an extra-hazardous occupation, since the perils which ever encompass human existence are never so bitterly emphasized as in the first year of life.'

"The government census figures show that in the last ten years more than two million five hundred thousand of the children born in this country died before reaching the age of one year. This, in terms of total population, is as if Chicago, the second city of the United States, were to be wiped out of existence every ten years, not a single life being saved. It means the annihilation, each decade, of a population as large as that of the state of New Jersey. To state the same fact differently, the deaths of infants under one year in this country during 1913 was nearly equal to the combined population of Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah and Nebraska."

PURE AD. LAW FOR ST. LOUIS

AN ORDINANCE

making it a misdemeanor for any persons, firm or corporation, or any employee thereof, to make, publish, disseminate, circulate or place before the public, with intent to sell or in any wise dispose of merchandise, securities, service or anything offered by such company or person for sale or distribution, any untrue, deceptive or misleading statement in any newspaper, handbill, placard, banner or sign or other advertisement, and prescribing a penalty.

Be it Ordained by the Municipal Assembly of the City of St. Louis, as follows:

SECTION 1. Any person, firm, corporation or association, or any employee thereof who, with intent to sell or in any wise to dispose of merchandise, securities, service or anything offered directly or indirectly by such person, firm, corporation or association to the public for sale or distribution, or with intent to increase the consumption thereof, or induce the public in any manner to enter into any obligation relating thereto, or to acquire title thereto, or any interest therein, makes, publishes, disseminates, circulates or places before the public, or causes directly or indirectly to be made, published, disseminated, circulated or placed before the public, in this city, in any newspaper or other publication sold or offered for sale upon any public street, sidewalk, or other public place, or offered or delivered by carrier or other agency, to any person or persons, or any subscribers, within this city, or on any sign in any manner posted, exposed, or displayed upon any street, sidewalk, or public ground, or in any handbill or advertisement in any manner displayed, or posted upon any street, sidewalk, or public ground, or on any placard, advertisement or handbill in any manner delivered, displayed, exhibited, or carried in any street or public ground, or upon any sidewalk, or any banner or sign flying across the street or from any building or structure of any kind, any advertisement of any sort, regarding merchandise, securities, service or anything therein offered for sale to the public, which advertisement contains assertion, representation, or statement which is untrue, deceptive or misleading, as to quantity, quality, character, kind, cost, or value of anything therein or thereby mentioned for sale shall be guilty of a misdemeanor and upon conviction shall be fined not less than One Hundred (\$100.00) Dollars nor more than Five Hundred (\$500.00) Dollars for each offense.

[The bill became a law and is now in force.—Ed.]

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY'S FOURTEENTH MEETING

Washington University Hospital, May 11, 1914

19. RESECTION OF CORNEAL SCARS.—By DR. MEYER WIENER

The two cases which I am demonstrating this evening are to show the clinical outcome of resection of corneal scars, which is but a continuation of the work that I have done in the anatomical laboratory with Doctor Terry.

This patient whom you now see is 71 years of age and has seen poorly since childhood following smallpox. The left eye was burned with carbolic acid forty years ago and has been his poorer eye. He came to the Washington University Clinic Feb. 3, 1914, with dense opacities in both corneas. Acuity, right, 2/300; left—hand movements. His left eye was operated on three months ago and he can now count fingers 3 feet away while the cornea is seen to be much clearer from week to week; the right eye getting gradually worse. If the case continues to improve at the present rate, the outlook is extremely promising.

The other patient came to the clinic Oct. 19, 1911, and was operated on in February, 1912, for a dense central corneal scar of the left eye which had been present since childhood, and which had frequently broken down and ulcerated. The scar was unsightly and vision was limited to hand movements. The cosmetic result is now almost perfect; a casual glance not revealing any opacity. Acuity with +10.00 D.Sph. C — 4.00 D.Cyl. ax. 165 V = 12/38.

20. THE PHTHALEIN TEST IN ORTHOSTATIC ALBUMINURIA.—Preliminary Note.—By DR. T. C. HEMPELMANN

The phenolsulphonephthalein test of Rowntree and Geraghty was performed on four orthostatic and two control cases, in both the normal position and in the lordotic position. Only marked cases of the lordotic type of orthostatic albuminuria were chosen, cases in which the position of accentuated lordosis produced a marked increase in the albumin content of the urine.

In the control cases change of position produced no change in the phthalein output. In the orthostatic cases, the phthalein test showed a normal output with the patient in the normal position, but a delayed and diminished excretion when the patient was in the position of accentuated lordosis.

DISCUSSION

MR. GESELL: I would like to ask Dr. Hempelmann if the pulse pressure was taken in these cases? I got similar results in experiments on dogs in which the pulse pressure was changed while the volume flow of the blood through the kidneys and the blood pressure remained the same. In these experiments albumin appeared in the urine more when the pulse pressure was diminished than when it was normal. The excretion of solid substances, such as sodium chlorid and urea had the opposite relation to pulse pressure. That is, more was secreted during periods of large or normal pulse pressure than during periods of decreased pulse pressure.

DR. HEMPELMANN (in closing): The pulse pressure was not taken in any of these cases. I think, however, Mr. Gesell's findings agree with those of Dr. Erlanger, as observed in his case of orthostatic albu-

minuria. It has always been a question as to whether these kidneys were functionally normal, aside from the albuminuria, or whether there was some functional deficiency, and it was with the view of throwing some light on this subject that this investigation was undertaken.

21. PITUITARY EXTRACTS IN OBSTETRICS.—By DR. Q. U. NEWELL

The observations are based on upward of seventy-five cases. The following four preparations were used: Hypophysis (Farbwerke-Hoechst Co.), Pituitrin (Parke-Davis & Co.), Vaporole (Burroughs-Wellcome & Co.) and Pituitary Extract (Armour & Co.). The early observations were made with doses of the full 1 c.c. ampule.

Within three to five minutes after injection, where previous pains were slight and irregular, the uterus was noticed to contract with marked vigor and in about 25 per cent. of the cases to undergo a tetanic like contraction, a condition which can be designated by the term of "Stormy Uterus." Distinct contractions and relaxations of the uterus were noticed during longer periods of markedly increased or improved uterine tone. This could be detected both by palpation of the contracting uterus and the behavior of the patient. The stormy conditions last from five to twenty-five minutes ordinarily, and in the majority of cases terminating with regular contractions and relaxations of uterus for a longer period.

In some cases labor was terminated while the uterus was in the state of "storm contraction." The pain at the onset of this terrific contraction is excruciating. The patient immediately gives a loud cry and rolls and tosses in bed until the "storm" subsides, whereupon she becomes quiet again and continues in an apparently normal course. Immediately following the injection there is a rise of blood-pressure from eight to twenty-five millimeters, which lasts ordinarily about thirty minutes and then gradually begins to fall. The pulse is slowed five to ten beats per minute; the fetal heart beat is slowed at times to as low as 110 beats per minute, which would suggest that the child's oxygen is being interfered with. However, in these cases the child has been delivered promptly and respirations were established spontaneously with but very few exceptions.

The "storms" of uterine contraction following injection of pituitary extracts were so great at times as to require morphin or chloroform anesthesia. Knowing the dangerous effects on both mother and child following the use of the larger doses of one cubic centimeter, the administration in much smaller doses was tried with success.

At first 3 minims were injected, which was sufficiently effective in the majority of cases. If 3 minims failed to bring results, 5 or 10 minims were given at the end of a half hour. "Stormy" contractions of the uterus did not occur with the use of small doses of the extracts. The smaller doses caused strong pains with regular and rhythmical contractions of the uterus. When small fractional doses were given in the manner described it was only in a very few cases that it was necessary to give a total amount of as much as 1 cubic centimeter.

During normal labor we have always given "Pituitrin" hypodermically, deep in the gluteal muscles, which was followed by no bad effects, such as local induration or pain. We have used it in the first, second and third stages of labor. In the first stage, if small initial doses of 3 to 5 minims are used one can control the pains readily; in the second stage it is also preferable to use small doses, particularly when any doubt exists about the size of the pelvis and the child's head. The presence of any degree of pelvic dystocia may give rise to serious dangers to

the mother or child should the massive dose of 1 cubic centimeter produce the "stormy" uterine contractions. The gradual stimulation of the uterus by the smaller doses may often overcome the dystocia with a slow moulding of the baby's head. In the third stage, pituitary extract acts very promptly in expelling the loosened placenta from the uterine cavity. Following the expulsion of the placenta the uterus contracts promptly, but where there is a tendency for the uterus to relax, the condition should be carefully watched and "Pituitrin" followed by ergot when necessary.

For induction of labor "Pituitrin" is of uncertain value, yet in all of the present cases with the uterus already irritable, the desired results were obtained. On the other hand, in three cases the attempt to induce premature labor was not successful. Fractional doses were used in these cases, the dose being repeated if necessary.

"Pituitrin" was used in three cases of cesarean section with good results. One cubic centimeter was injected deep into the gluteal muscles just before the abdomen was opened. The uterus was found contracted firmly and remained so after the operation.

Pituitary extract was used in two cases where the mother's milk was insufficient. No effect was observed.

In cases of post-partum hemorrhage pituitary extract always acted promptly, and bleeding ceased immediately. Since its effect is but of short duration, it should always be followed with ergot.

Whereas it was found that pronounced toxemias formed the only contra-indication to the use of pituitary extracts when given in the smaller doses, not alone toxemias but also arteriosclerosis, conditions of contracted pelvis, and various abnormal presentations of the child formed contra-indications when the larger doses of one cubic centimeter were used.

DISCUSSION

DR. SCHWARZ: This short paper of Dr. Newell's really represents much more work than is apparent on the surface. He speaks of 75 case records, but in reality we have been using these various extracts for fifteen months quite extensively. The studies are based on 75 cases in which Dr. Newell personally conducted the observations from start to finish. We were seeking in the first place the true place of these preparations in obstetrical therapeutics. In the second place we wanted to find out the relative value of the various preparations which were obtainable on the market. We are not quite ready to say which of these four preparations we have used is to be preferred.

The use of the fractional doses as described by Dr. Newell is really a great advance in the use of the pituitary extracts. The work has been very satisfactory and it has shown that the various preparations of pituitary gland deserve a very good and prominent place in obstetrical therapeutics.

DR. G. C. ROBINSON: I have had experimental experience with pituitrin in only one rabbit. Following the injection of pituitrin intravenously, we obtained a marked effect on the heart. There was a definite disturbance of conduction and marked arrhythmia. Of course, no conclusions can be drawn from one observation but it is worth while in using pituitrin clinically in large doses to watch for cardiac irregularity to determine whether the pituitary extract does, in these cases, have any effect on the heart beat.

DR. STORRS: It seems to me to be very evident that the proper note has been sounded by Dr. Robinson about pituitary extract. It is a new thing and for that reason I think our work in the matter, feeling our way along and getting acquainted somewhat—is the more careful way to go about it. It would be a wise thing for the obstetrician who is going to use

this extract to determine to get acquainted with a single preparation and in that way be able to gauge his effects. There is more or less uncertainty as to how the preparation is made by the different manufacturers. One observation I might add as a little precautionary thing. I do not know how much there is to it. It has been noticed after the use of pituitrin that there is a considerable increase in after pains. This needs to be watched for and recognized as one of the possibilities of pituitary complications.

DR. JACKSON: As has been suggested by Dr. Storrs, the active principle of pituitary extract is as yet unknown. One author has suggested that it may be B-iminazolyethylamine and that this body might be used in place of pituitrin. Since B-iminazolyethylamine is a well-known chemical substance exact doses with it may be readily attained.

The behavior of the blood-pressure under pituitrin is interesting. I think I can best illustrate this by a drawing on the blackboard. When the drug is injected intravenously there is produced a considerable rise in pressure with a slowing of the heart. If a second injection be given when the pressure has again fallen to its normal level a second rise will be produced. But this rise is much less than the first. Similarly if a third or fourth injection be given both the extent and duration of the following rise in pressure will progressively decrease until by the fifth injection (and possibly earlier) a fall in pressure will result from injection of the drug. It has been suggested that this fall may be due to a sort of secondary peripheral vaso-dilating action of the substance by which the muscle fibers of the arterioles are weakened and caused to relax. The dilatation may, of course, be due to some other constituent of the pituitary extract than that which causes the rise in pressure. I have been inclined to wonder whether or not this secondary peripheral weakening and relaxation of smooth muscle fibers which occurs in the blood vessels might not also occur in the uterine musculature provided sufficient quantities were given. This point could probably not be demonstrated clinically in the human species, but might be brought out in some of the lower animals.

If the sympathetic nerves going to the uterus of a non-pregnant or virgin cat be stimulated electrically an inhibition and relaxation of the organ is produced. But if these nerves be stimulated in a pregnant cat contraction results. It would be interesting to know whether or not pituitary extract could be used clinically to obtain any information indicating whether or not any such change in the nature of the innervation to the uterus occurs in the human species. For although pituitary extract is usually considered to act by direct stimulation of the muscle fibers it should be recalled that the substance is much more active in producing contractions in the full-term uterus than it is in the early months of pregnancy.

22. VARIATIONS IN THE FAT CONTENT OF THE BLOOD.—By DR. W. R. BLOOR

The paper presented was a report of a series of preliminary investigations undertaken to determine in a general way the variations in the fat content of the blood and the significance of these variations. Since it was desired first to find out the variations under approximately normal conditions, the experimental procedures were mild. They consisted in (1) feeding fat, (2) intravenous injections of fat, (3) fasting from five to seven days, (4) narcosis. The results of these procedures were as follows:

(1) Feeding fat (a) to animals in normal nutritive condition—a rise in the blood fat which begins at about the second hour after feeding and reaches a maximum in about eighteen hours; (b) to animals which had been fasted for six to seven days. The rise was much less marked than in the normal animals.

(2) Injections of fat. The preparations used were (a) casein emulsions, (b) egg yolk diluted with an equal part of salt solution, (c) colloidal suspensions of fat—made by dissolving the fat in alcohol, pouring the solution slowly and with stirring into distilled water, then boiling off the alcohol and continuing the boiling until the solution was sufficiently concentrated. The injections were made with a hypodermic needle into the left external jugular vein and the samples of blood for examination were taken from the right jugular.

No change in the fat content of the blood was observed after injections of casein emulsions or colloidal suspensions. A marked increase in blood fat amounting, however, to somewhat less than would have been expected from the amount of fat injected was observed in the egg yolk injections. The increase was less and lasted for a shorter period in fasting animals than in fed ones.

(3) Fasting. The animals were fasted for from five to seven days. Varying results were obtained. In some cases increases in blood fat were obtained, in others not. In those animals in which an increase was observed there was a maximum at about the fifth day, after which there was a decrease. Suspecting that the differences in the results might have been due to differences in the nutritive condition of the animals, one of the animals which had shown no rise in a fasting period was stuffed with food rich in fat for eight days and then fasted. A rise was obtained exactly like those of the first series of animals.

(4) Narcosis. Animals were (a) anesthetized with ether for two to three hours, (b) anesthetized with chloroform for three-hour periods, (c) given doses of morphin subcutaneously, and (d) given alcohol by stomach tube. Increases in the blood fat during the narcosis were noted with ether alone. A marked rise in the blood fat during the two or three days following narcosis was observed in the case of chloroform and morphin. Thinking again that the condition of the animal might have had some influence on the changes, an animal which had shown no change during a chloroform narcosis was heavily fed with fat food for a week and then anesthetized with chloroform. A marked rise in the blood fat was noted.

Examination of the blood fat of dogs in normal nutritive condition was made over considerable periods of time and the blood fat was found to be very constant.

This series of experiments is believed to show:

(1) That there are temporary fat store-houses where fats may be quickly stored.

(2) That the fat so stored may be readily released, as for instance in anesthesia, resulting in a flooding of the blood with fat which may be a factor in the occasional deaths from anesthesia.

(3) That the blood fat of dogs is very constant. It is therefore to be expected that the fat of human blood would be similarly constant and that the determination of the fat of the blood would give valuable diagnostic data.

DISCUSSION

DR. SHAFFER: These results of Dr. Bloor's seem to me to be quite interesting and important from several points of view in physiological chemistry and perhaps also in pharmacology. His results on the effects of anesthetics appear to be rather difficult to interpret satisfactorily until we can know more in regard to the qualitative composition of the fatty material causing the rise noted after anesthesia. The increase in the blood fat may of course be due to neutral fat, to cholesterol esters, or to phosphatids of nervous tissue.

This work of Dr. Bloor's would appear to be especially important because of the fact that his very clever method opens up a new field in which there are practically no observations at present except

those which Dr. Bloor has presented. Previous work on the variations in blood fat has been done by methods which are probably unreliable. There is one feature in which it seems to me the results so far obtained in regard to the blood fat as well as the results concerning blood sugar, are somewhat disappointing; one might expect to find variations in the amount of blood sugar or of fat in the direction of the amount being burned at the time, that is when the energy is being derived chiefly from carbohydrates, one might expect that the blood sugar would be higher than it is when but little carbohydrate is being burned, but the blood sugar appears to be remarkably constant under normal conditions and Dr. Bloor's results indicate that the blood fat behaves in the same way. He does get, it appears, a slow rise in the blood fat about the fifth day of fasting, when about 80 per cent. of the energy of the animal is being derived from body fat, but this rise of blood fat falls rapidly when there is certainly no decrease in the amount of fat burned; so that there would appear to be no direct parallelism between the amount of fat and sugar being burned and their concentration in the blood stream.

23. OBSERVATIONS ON THE CELLULAR ELEMENTS OF THE BLOOD IN SKIN DISEASES.—By DR. M. F. ENGMAN and

DR. ROBERT DAVIS

The present investigation was not undertaken for the purpose of determining any preconceived ideas about the cellular elements of the blood in skin diseases, but to see what the study of a large number of mixed cases of skin diseases might elicit.

The protocol, of course, is the principal feature about this investigation. It represents 298 cases, which includes 68 of the various diseases of the skin. To summarize the particular points of interest in the study, we will take up the cellular elements as they are enumerated in the protocol. In this summary we only include those diseases in which five or more cases were counted, unless something was very striking in the percentages of the cellular count.

Leukocytes.—There were 233 cases in which the leukocytes were counted, 88 of which showed an increase above 10,000. There was a leukopenia in 15 cases out of the 233. The fact that a leukocytosis does not occur more frequently is rather striking, particularly in staphylococcal dermatitis, where it occurs in only 2 cases out of 10. Scabrous dermatitis gave the largest number of absolute leukocytosis, which was 7 cases out of 9.

Polynuclear neutrophils.—In the polynuclear neutrophils, of the 254 cases in which they were counted, 127 showed a normal relationship (60 to 80 per cent.), 113 relatively decreased, and 14 relatively increased. The increase was most marked in 3 cases of dermatitis herpetiformis, without any discernible cause; and, in one case of dermatitis scabrous, which can be accounted for by an abscess of the leg. There was no increase in any of the cases of staphylococcal dermatitis.

In one case of keratosis follicularis the relative count showed 89 per cent., which can be accounted for by the ulceration of the lesions in the perineum. In this case there was an absolute leukocytosis of 12,400.

It is curious to note that after Coley's fluid, in mycosis fungoides, the polynuclear count immediately shot up about 80 per cent. This was noticed after each injection. Relative increase of the polynuclears is especially marked in those diseases where some of the other cell elements were increased.

Large mononuclears.—The large mononuclears have been to us the most striking feature in this investigation, as we found out of 250 cases in which they were

counted 167 gave a relative increase. This you can see is accurate, as in each instance there is a compensating relative decrease in the polynuclear neutrophils. To what this mononuclear increase can be attributed is very difficult to say. It does not seem to be due at all to the amount of surface involved in the inflammatory process; as the cases of acne and epidermolysis bullosa, for instance, with the involvement of only a small area, showed four cases out of seven and three cases out of three respectively, while in ichthyosis, where the whole surface is involved, two cases out of three showed a relative increase.

In one case of dermatitis herpetiformis (our Case No. 26), in which the polynuclear count was 46 per cent., the lymphocyte 0.4 per cent., and the eosinophil 5 per cent., the mononuclear leukocytes went up as high as 47 per cent. There seemed to be no untoward conditions to have caused this peculiar increase.

Again, several of the cases of dermatitis herpetiformis showed from 20 to 30 per cent., with a low polynuclear count. We might say in all the processes where there was a marked serous inflammatory condition the increase was most striking, especially in dermatitis herpetiformis and dermatitis exfoliativa.

Lymphocytes.—Out of 252 cases in which the lymphocytes were counted, there was a relative increase in 110 cases. (Taking 20 to 25 per cent. as normal.) The lymphocytes, as a rule, are relatively decreased in those cases in which the large mononuclears are relatively increased; and, the polynuclears especially are relatively decreased in those cases in which the large mononuclears are relatively increased.

In four cases out of thirteen of psoriasis and in both cases of pupura the lymphocyte count was increased. Syphilis did not show a marked lymphocytosis except in a comparatively few cases.

In dermatitis herpetiformis, dermatitis seborrhoica and those diseases which showed a large mononuclear count, a relatively low lymphocyte count was observed. In both acute and chronic eczema the decrease is particularly marked.

In three cases of mycosis fungoides the lymphocyte count runs very low and there is no compensation except by the large mononuclears, which run very high, from 14 to 19 per cent. This is quite curious, as many observers place mycosis fungoides among the leukemias; but, we have always thought that those cases reported showing an absolute leukocytosis were not leukemias, as none of them showed a relatively high lymphocyte count.

The leukocytosis, in all of these cases, consisting principally of the polynuclear neutrophils, can be accounted for by the tremendous amount of secondary infection which occurs in most cases of this disease. In all four cases of mycosis fungoides there was no absolute leukocytosis, except after Coley's fluid.

Eosinophils.—As we have stated before, and you well know, the eosinophils (so-called eosinophil leukocytes) have been more written about in dermatology than any other cellular element of the blood. The literature on this subject is of course well known to you since the most excellent article by Schamberg, which appeared in February, 1912, in which he discussed this question and the literature in a very exhaustive manner.

It has been believed by investigators since the time of Leredde (who wrote one of the first communications on the eosinophils in relation to skin diseases) that the eosinophils, when they appeared in relatively high quantities in the blood, were directed from the bone marrow by some toxic substance. We know, at present, that their production is undoubtedly greatly stimulated by the presence, and often even by the extracts, of animal parasites in the body.

From modern experiments there is a tendency to believe that eosinophils occur quite markedly in all

forms of the phenomena known as anaphylaxis. Especially is this true in experimental anaphylaxis.

French, in his investigation of 90 cases, found only four showing marked eosinophilia; but, unfortunately, as he stated, there were no cases of pemphigus included in his report and only one of dermatitis herpetiformis, a disease in which it is supposed to occur in a certain large per cent.

In the present investigation, out of 234 cases in which the eosinophils were counted, only 75 showed a relative increase, or 32 per cent., which is quite contrary to the prevailing impression; as in most text-books on hematology it is remarked that in most skin diseases there is an increase in the relative number of these cells.

In dermatitis herpetiformis, out of 26 cases, only 13 showed an eosinophilia. In pemphigus there seems to be a decided tendency to eosinophilia, as in 8 out of 10 cases there was a high relative increase. Contrary to the opinion of some writers, we believe that this relative increase is more marked in those diseases where there is a great involvement of cutaneous surface.

In the erythematous group of skin diseases, which is supposed to be due principally to the result of some type of anaphylaxis or some form of split proteid poisoning, there was a tendency to a relative increase of the eosinophils. This included urticaria, purpura and other forms of the erythematous group.

The highest percentage of these cells recorded in our investigation was in a case of pemphigus vulgaris, which ran from 45 to 74 per cent., the latter count occurring just a few days before death, when there was also found 9 per cent. of myelocytes in the blood. This case had many blood counts, the percentage of eosinophils running higher than in any other instance we have seen yet recorded.

In this case, where the eosinophilia ran high, a marked absolute leukocytosis was shown throughout the disease, just before death running up to 41,000, 74 per cent. of which was eosinophils.

DISCUSSION

DR. V. E. EMMEL: The results are suggestive concerning the occurrence of a numerical increase of eosinophilic leukocytes. As is well known, there are two views maintained as to the origin of eosinophils—the one, that the eosinophilic granules differentiate *de novo* within the cytoplasm, possibly in correlation with certain nuclear changes; the other, that the granules in question may arise through the injection and further intracellular modification of certain generating tissue elements. Dr. Engman reports the observation of an increased eosinophilia in association with certain cases of skin disease involving a large cutaneous surface. Is there any evidence indicating that this numerical increase of eosinophils may be related to a more extensive phagocytosis of necrotic tissue in the lesions and a consequent increase of eosinophilic granules in the leukocytes?

24. INTESTINAL OBSTRUCTION: A STUDY OF THE PRODUCTION AND ABSORPTION OF THE INTESTINAL TOXIN.—By DR. FRED T. MURPHY and DR. BARNEY BROOKS

Experiments were carried out with the purpose of reconciling, if possible, the contradictory statements and deductions from experimental work on the cause of symptoms and death in intestinal obstruction.

It has been generally agreed by workers in this field that the symptoms and death are caused by the absorption of a toxic material directly from the obstructed bowel, but this toxin has not been demonstrated in the circulation. Opinions differ widely as to the characteristics of this toxic material; one group

believing that it is a non-soluble substance which is destroyed by heat and which is the result of bacterial growth; another group that it is a soluble substance, is destroyed by heat, and that it is a perverted secretion from the intestinal mucosa, independent of the bacterial growth.

These experiments were carried out on dogs, always under full anesthesia, and with careful asepsis. They show that a marked difference exists in the characteristics of the toxic content of loops at different times, and under different conditions. For example, in the early period, the content of the loop contains a non-soluble and non-filterable toxic substance. At seventy-two hours, the content contains a toxic substance which is soluble to a degree, and is not destroyed by heat; that is, the apparent discrepancy in the results of investigators as to the filterability may be explained by the different lengths of time the observations were made, as well as different conditions. A definite pathologic picture is found in the animals dying from intestinal obstruction and in the animals dying from the effects of intraperitoneal or intravenous injection of the toxic content. Loss of fluids does not seem to be an essential feature. The typical picture is that of hemorrhagic enteritis, sharply limited at the pylorus and progressively decreasing in the ileum.

The most interesting part of the experimental work had to do with the influence of bacteria on the formation of the toxin. In one instance, an isolated drained loop of intestine became, after draining a year, sterile. This loop was obstructed for a longer period than is consistent with life after obstruction of jejunal loops containing bacteria, and the obstructed content was found to be non-toxic. At a second obstruction, in which bacteria were present, the obstruction produced symptoms and a toxic fluid. Gall bladders, when sterile, could be obstructed and allowed to become all but gangrenous without producing symptoms, either in the animal, or a toxic fluid. On the other hand, infected gall bladders produced a content which was toxic to the host and toxic on injection. The symptoms and pathologic picture were the same as that produced by intestinal obstruction. Loops of intestine placed in the thermostat also may produce a toxic substance which causes the same symptoms and pathologic picture as the toxins produced in the living animal. The toxic material from the loops in the thermostat possessed, however, different special characteristics.

Other experiments were done to show the effect of circulatory change on the absorption of the toxic content; still others to demonstrate that this toxic material is not absorbed from intact mucous membrane. The latter fact was graphically demonstrated by low intestinal obstruction which had been allowed to heal in and had been unrelieved for some weeks, the animal showing no symptoms; but the content on injection proved to be extremely toxic.

The difference in the production of symptoms between obstruction of the bowel high and low, the writers believe may be explained solely on the basis of the degree of distention leading to circulatory disturbance and a destruction of the mucosa. Numerous experiments are cited to support this idea.

The authors believe that this study warrants the conclusions: that the conflicting opinions are to be explained by the various conditions and the time at which the observations were made; that death in intestinal obstruction is the result of a toxemia due to direct absorption from the obstructed intestine; that the toxin is the result of bacterial growth and is not specific for any part of the intestinal tract; that this toxin is not absorbed from the normal mucous membrane, and that in the production of symptoms, circulatory disturbance is an important factor.

ST. LOUIS MEDICAL SOCIETY

Meetings of the General Society

APRIL 18, 1914

The meeting was called to order at 8:45 p. m. by the president, Dr. A. F. Koetter.

The scientific program consisted of the following:

Dr. Marsh Pitzman read a paper entitled, "On the Rationale of the Use of Antiseptics and Germicides in Inflammations of the Mucous Membranes," with chart demonstrations.

At the request of the chair, Dr. Bransford Lewis introduced the guest of the evening, Dr. J. A. Crisler of Memphis, Tenn.

Dr. Crisler read a paper entitled, "The Prevention of Peritonitis in Belated Cases of Intra-Abdominal Infections with Especial Reference to Iodin."

Discussion of Dr. Crisler's and Dr. Pitzman's papers by Drs. H. McClure Young, W. E. Shahan, William T. Coughlin, O. H. Elbrecht, Willis Young, W. C. G. Kirchner, Wm. E. Leighton and F. W. Bailey; Drs. Pitzman and Crisler closing.

Dr. O. H. Elbrecht moved that a rising vote of thanks be extended to Dr. Crisler for presenting his most interesting paper. Unanimously carried.

Dr. R. Emmet Kane moved that a committee be appointed to visit His Honor, the Mayor, and ask him to sign the pure ad. bill and make it become a law. Seconded and carried.

At 10:45 p. m. the society adjourned to the parlors and an informal reception was given to Dr. Crisler.

APRIL 25, 1914

The president announced that the society, with the Wednesday Club and the Civic League are cooperating with the American Society for the Control of Cancer in the public meeting to be held at the Sheldon Memorial Hall, Washington, west of Grand, on Friday, May 1, at 8 p. m. The subject will be "The Prevention and Control of Cancer." Hon. Charles Nagel will preside. Dr. W. L. Rodman of Philadelphia and Mr. Frederick L. Hoffman of New York will make addresses. Dr. Leo Loeb and Mr. Curtis Lakeman of New York will discuss special features. The members of the society are urged to call the attention of their friends to the fact that the public is invited to this meeting.

The scientific program consisted of the following:

At the request of the chair, Dr. Robert M. Funkhouser introduced the guests of the evening, Dr. W. S. Allee, state senator, of Olean, Mo. Dr. Allee read a paper entitled, "State Medical Legislation from the Viewpoint of the Physician."

The president called on Dr. W. C. G. Kirchner to introduce Dr. Charles P. Emerson, dean of the University of Indiana. Dr. Emerson addressed the society on "Medical Legislation and Social Service."

The president announced that the Hon. John T. Barker, attorney-general of Missouri, had been called to Washington, D. C., unexpectedly and could not be present.

The discussion following Dr. Allee's paper and Dr. Emerson's address was opened by Dr. Robert M. Funkhouser and closed by Dr. Allee and Dr. Emerson. Drs. A. H. Hamel, Robert E. Schlueter and O. H. Brown also discussed the papers.

Dr. Robert M. Funkhouser moved that a rising vote of thanks be extended to Dr. W. S. Allee and Dr. Charles P. Emerson for their most interesting papers, and that the by-laws be suspended and Dr. Charles P. Emerson, dean of the University of Indiana, and Dr. Allee be elected honorary members of the society. Seconded and unanimously carried.

Dr. Robert M. Funkhouser announced the death of Dr. Ludwig Bremer, a former president of the society, which occurred on April 12 at Dresden, Germany. He said, "I feel some suitable action should be taken as in his time he exerted a great influence in the profession of medicine and helped to elevate its standards and efficiency. He was born on Jan. 5, 1844, in Blankenburg, Germany, and came to the United States in 1865. He studied medicine at the St. Louis Medical College and graduated in 1870. He was a physician at Quarantine in 1871. He practiced in Carondelet and Belleville until 1880, when he went abroad, returning to St. Louis in 1883. From 1886 to 1889 he held the chair of pathology and physiology in the Missouri Medical College. His contributions to medicine were many and varied. In hematology, neurology, physiology and pathology, especially, his contributions were notable. He was a student and scholar, and his knowledge was by no means confined to medicine. Suitable resolutions should be taken by this society, the same spread on the minutes and a copy sent to his widow and daughter in Dresden."

On motion of Dr. M. A. Bliss, seconded by Dr. W. B. Dorsett, the above matter was referred to the committee on necrology, with instructions to carry out the suggestions of Dr. Funkhouser.

At 10:40 p. m. the society adjourned to the parlors and an informal reception was given to Drs. Allee and Emerson.

MAY 2, 1914

The scientific program consisted of the following:

Presentation of patients and specimens bearing on cancer of the breast, and exhibition of specimens of cancer.

Dr. William E. Leighton exhibited two cases of carcinoma of the breast, one of six years' duration and the other of one year's duration; both patients from the Skin and Cancer Hospital.

Dr. George Gellhorn exhibited a patient with inoperable carcinoma of the uterus.

Dr. William T. Coughlin exhibited a patient on whom he did a complete Halstead operation for carcinoma of the breast, with removal of the entire breast and pectoral muscles and dissection of axilla. The patient was shown for the purpose of illustrating the splendid function of the arm.

At the request of the chair, Dr. Frank J. Lutz introduced the guest of the evening, Dr. William L. Rodman of Philadelphia, Pa.

Dr. Rodman read a paper entitled, "Cancer of the Breast and Its Treatment," illustrated with photographs and charts.

Dr. Wm. E. Leighton opened the discussion. Drs. F. J. Lutz, M. F. Engman, M. B. Clopton, J. McH. Dean and Norville Wallace Sharpe also discussed the paper; Dr. Rodman closing.

Dr. Leighton illustrated with lantern slides during his discussion.

Dr. M. B. Clopton moved a rising vote of thanks to Dr. Rodman for his interesting and instructive paper, and that the by-laws be suspended and Dr. Rodman be elected an honorary member of this society. Seconded and unanimously carried.

Exhibition of cancer specimens from the City Hospital were demonstrated by Dr. F. A. Baldwin, city bacteriologist.

On motion, the society adjourned at 11 p. m.

Meeting of the Council

MAY 6, 1914

The meeting was called to order at 9 p. m. by the president, Dr. A. F. Koetter.

In the absence of Dr. Kuhlmann, Dr. Cyrus E. Burford was elected secretary pro tem.

The minutes of the council meeting of April 8 were read and approved.

Dr. G. Canby Robinson's application for active membership, by transfer from the Medical Society of the County of New York, was read. Dr. Robinson was unanimously elected.

The application of Dr. Samuel E. Peden for active membership, by transfer from the Marion County Medical Society, was read for the first time.

The membership committee reported favorably on the following, all of whom were elected by ballot: Dr. Edwin C. Ernst, Mullanphy Hospital; Dr. Mathias A. Wagner, 5294 Page Avenue; Dr. W. E. Burke, 3353 Market Street; Dr. Oscar F. Baerens, 303 Commercial Building.

Dr. W. C. G. Kirchner, chairman of the program committee, reported that his committee had planned to make the meeting of June 6 a public one, and asked an allowance of \$25 for refreshments.

Moved and seconded that the program committee be allowed \$25 for refreshments for the meeting of June 6.

The library committee submitted the following report for the month ending April 30, 1914:

It has been found necessary, on account of the accessions to the library, to increase the shelf room which has been accomplished in a very satisfactory manner, we believe, by the erection of a book shelf along the eastern wall of the middle room and in the closet on the east wall, between the front and second room, and also by shifting from the other closet books and stationery to an equally secure and accessible place on the same floor.

The librarian reports that there were added during the month of April, 101 books and bound volumes of journals, 291 books and journals were consulted; 33 books and back volumes were loaned to members, and there were 142 visitors to the library.

In all respects the library is being better patronized each month, and its sphere of usefulness is being steadily extended.

The librarian is still engaged in compiling the inventory. F. J. LUTZ, Chairman.

Moved and seconded that the library committee's report be accepted. Carried.

Dr. Koetter reported that we are entitled to fourteen delegates to the Missouri State Meeting, and that he had called a meeting for Saturday evening, May 9.

A letter from Dr. Schluter stating that Dr. E. S. Smith's letter should be referred to the committee on expert testimony instead of the defense committee, and another enclosing a copy of the proposed amendment to the defense section of the by-laws of the Missouri State Medical Association were read. The secretary was instructed to send each one of the delegates a copy of the proposed amendment.

A letter from the American Physical Education Association extending their hearty appreciation for the cooperation given them, and one from Mr. A. E. Kindervater, secretary of the American Physical Education Association, thanking us for taking care of the therapeutic section, were also read.

Letters from Dr. Allee and Dr. Emerson, thanking the society for electing them to honorary membership, were read.

A letter from Hon. James T. Lloyd of the U. S. House of Representatives, referring to the Surgeon-General's Library was ordered, by the chair, referred to the committee on health and public instruction of the Missouri State Medical Association.

Councillors present: Drs. A. H. Amerland, Wm. H. Stauffer, Frank Hinchey, Robert M. Funkhouser, A. H. Hamel, C. E. Burford, P. G. Hurford and A. F. Koetter.

Councillors absent: Drs. M. A. Bliss, Walter B. Dorsett, Roland Hill, Philip Hoffmann, F. J. V. Krebs and F. C. E. Kuhlmann.

Visitors present: Drs. F. J. Lutz, John W. Marchildon and W. C. G. Kirchner.

Meetings of the General Society

MAY 9, 1914

The scientific program consisted of the following:

Dr. F. J. Taussig read a paper entitled, "The Prevention and Treatment of Vulvo-Vaginitis in Children." Discussion by Drs. P. C. Jeans, P. G. Hurford, T. C. Hempelmann, A. S. Barnes and John Zahorksy; Dr. Taussig closing.

Dr. W. S. Barker read a paper entitled, "The Use of Blood Serum of Immunes in the Treatment of Malignant Searlatina." Discussion by Drs. John C. Falk, John Zahorksy, James H. Tanquary and L. C. Boislaniere; Dr. Barker closing.

A letter addressed to the president, asking the privilege of a private exhibition of a picture entitled, "The Drug Terror" for an evening, in the rooms of the St. Louis Medical Society, in order to get the opinion and endorsement of the society on this picture, etc., was referred to the committee on health and public instruction, with power to act.

Dr. A. S. Barnes reported having received a letter from the National Red Cross Association calling for a list of volunteers, and that the committee was ready to receive the names of any of the members who wish to volunteer their services in case of war.

MAY 16, 1914

The scientific program consisted of the following:

Dr. Jos. L. Boehm reported a case of paralysis of the bladder cured by intraspinal injections of salvarsanized serum. He also demonstrated a new needle for intraspinal injections, with manometer for measuring intraspinal pressure. Discussion by Dr. D. S. Booth.

Dr. Willard Bartlett read a paper entitled, "Exclusion of the Pyloric Portion of the Stomach," an experimental and clinical study, illustrated with charts and lantern slides. Discussion by Dr. Ellis Fischel and Dr. Samuel E. Peden.

Dr. J. H. Amerland read the following report for the delegates to the Missouri State Medical Association:

To the St. Louis Medical Society:

I have the honor as chairman of the delegates to the meeting of the Missouri State Medical Association held at Joplin, May 12 to 14, to report the following:

There were present at this meeting the following delegates: Drs. Robert Barclay, O. H. Brown, Joseph Grindon, A. F. Koetter, Wm. H. Stauffer, Walter Baumgarten, Wm. T. Coughlin, Walter B. Dorsett, M. A. Bliss and Robert Schlueter, with the following absentees: Drs. Fred W. Bailey, P. G. Hurford, E. A. Meisenbach and F. J. Taussig. The president appointed in their stead, Drs. E. J. Schisler, J. H. Amerland, R. Buhman and W. G. Moore.

We wish to call the attention of the society to the importance of insisting that every man who allows his name to be submitted for the office of delegate to the state association, of being present at all of the meetings. Some of these we have mentioned as being present came in the first day and left before all the meetings of the House of Delegates were held, and several did not make their appearance until the last day of the meeting. By doing this they cannot keep in touch with the important work that must be accomplished by the House of Delegates which is of vital importance to this society.

We wish further to call your attention to the change in the by-laws that was introduced at the St. Louis meeting of the state society in 1913, which places the election of the president in the House of Delegates.

The orations on medicine and on surgery were abolished.

The following were elected officers of the Missouri State Medical Association for 1913-1914: H. C. Shuttee, president, West Plains; J. A. McComb, first vice-president, Lebanon; T. A. Coffelt, second vice-

president, Springfield; G. O. Cuppage, third vice-president, Moberly; W. A. Clark, fourth vice-president, Jefferson City; Wm. G. Estill, fifth vice-president, Lawson; delegates to the American Medical Association: Drs. E. H. Miller, Liberty; A. W. McAlester, Jr., Kansas City, and H. L. Reid, Charleston; the holdovers being Drs. Robert M. Funkhouser and E. J. Goodwin of St. Louis. No change was made in the committee on health and public instruction except the election of Dr. A. W. McAlester, Jr., as chairman. For the committee on medical education, Dr. George Dock was reelected. The defense committee consisting of Drs. Schluter, Kane and Dorsett, all of St. Louis, was reelected. The next meeting of the state association will be held at St. Joseph.

There were 360 members of the various county societies registered. The meeting on the whole was a successful one. The scientific feature was especially attractive, inasmuch as many interesting papers were contributed and discussed.

Respectfully,

WALTER B. DORSETT, Chairman.

On motion the report was accepted.

Dr. Rollin H. Barnes read the following report for the necrology committee:

In memoriam. Ludwig Bremer, M.D., Blankenburg, Germany, Jan. 5, 1844; Dresden, Germany, April 12, 1914.

The subject of this memoir was a resident of the city of St. Louis and its vicinity from 1865 to 1908, he having emigrated to this country from Germany when about 21 years of age. His father was a government official. His mother died when he was quite young and, being without brother or sister, it would appear that he was thrown much on his own resources even early in life.

He received his preliminary education in the gymnasium at Eisleben, and instruction in the more advanced studies, as philosophy and the sciences, at Berlin. After reaching St. Louis he taught school for a time at Glasgow, Mo., soon, however, taking up the study of medicine, and was graduated from the St. Louis Medical College in the class of 1870. He then entered the municipal medical service as resident physician at the institution known as the Quarantine Hospital, situated just below Jefferson Barracks, and which was an auxiliary and convalescent station to the City Hospital. On the termination of this service he engaged in private practice in Carondelet, and in Belleville, Ill., until 1880 when he returned to Europe and continued his medical studies and scientific researches at Strasburg, Zurich and Paris for several years. He came back to St. Louis in 1883 and at once took a leading position in the medical profession of the city, his special abilities on lines of physiology, pathology, histology, hematology and neurology being fully recognized and leading to his election to an appropriate chair in the Missouri Medical College in 1886, which was retained for a number of years.

His professional attainments were of the most scholarly and scientific order and his contributions, both oral and written, covered a wide and diversified field of knowledge which always commanded marked attention from those most competent to judge rightly in such matters.

Dr. Bremer was president of the St. Louis Medical Society in 1891 and he impressed on the work of that body a large measure of his own professional thoroughness and zeal, being a leader always and even forcing the pace of some who had not his gift of medical vision and scientific forethought. His influence for progress was felt in many directions, his outlook was ever broad and commanding, embracing views social, political and economic which he maintained with firm and well-grounded reasonings. The breadth of his sympathy and courage of conviction were attested by

the unyielding stand he took in behalf of the Boer republics in their struggle for independent against British power, as, in the local society formed to aid them, he was one of the most active of members, sparing nothing in his zeal to render help and when the end came and the local body was dissolved the funds which remained on hand, amounting to several hundred dollars, were turned over to him without condition for such disposition as he in his judgment might see fit to make—a local beneficence for the lodging of homeless persons ultimately receiving the funds.

That the ties formed during his medical experience in city service were binding on him was proved when, after leaving this city for residence abroad, he showed his interest in a local society of which he was one of the founders and an original member, on the recurring occasion of its annual dinner, by regularly cabling his greetings and good wishes to the assembled members and guests.

The destiny that presided over his career was prophetic in bestowing on him a name, the meaning of which is "renowned-in-fight," not, however, in the contentious sense but as signifying the character of one who, convinced of the righteousness of a cause, will stand for it at any cost—for all who have striven to spread some great truth continue thus to help the world to progress long after they have left it, for such is the power of truth to those who seek and follow it. But no means are known for measuring the influence for good exercised by a personality so forceful as was that of our late professional associate and coworker in science, Ludwig Bremer, the lesson of whose life holds out inspiration to all who care to study and fully consider it.

"And somewhere waiting for its birth,
The shaft is in the stone."

Your committee on necrology respectfully submits the foregoing memorial with the recommendation that it be adopted as the sense of the society that it be made a part of the record, and a copy be transmitted to the family of the deceased.

(Signed) GEORGE HOMAN.

Moved and seconded that the report of the necrology committee be accepted and that their recommendations be adopted. Carried.

On motion the society adjourned at 10:50 p. m.

The average attendance at the five meetings of the general society was 110.

F. C. E. KUHLMANN, M. D., Secretary.

MEDICAL SOCIETY OF CITY HOSPITAL ALUMNI (ST. LOUIS)

Minutes of April Meeting

The April meeting was called to order at the City Hospital on Thursday, April 9, at 8:45 p. m., by the president, Dr. L. J. Oatman.

THE PROGRAM

Specimens from Autopsies and Operations During March, by Dr. F. A. Baldwin.

Review of Cases (20) of Tuberculous Meningitis in the City Hospital During the Past Year, by Dr. N. F. Moore. Discussion opened by Dr. G. Canby Robinson, followed by Drs. Frank R. Fry, Given Campbell and T. C. Hempelmann.

A Hundred Cases of Typhoid Fever in the City Hospital, with Special Reference to Treatment and Complications, by Dr. Ralph McReynolds. Discussion opened by Dr. Geo. Richter. The paper was also discussed by Drs. Albert Taussig, G. Canby Robinson, C. H. Shutt, S. T. Lipsitz and W. C. G. Kirchner.

The meeting, both from the viewpoint of attendance and interest displayed in program, was very successful. Attendance, 65.

BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met in regular session April 24, in Dr. Dillon's office, Dr. E. H. Gist, president, occupying the chair. The meeting opened in due form with reading of the minutes of the last meeting, which were approved. Reading of letters of instruction to the delegates and giving credential papers followed, after which the president read a very interesting paper on our duty and responsibility to the society, praising that which had been done in the past, and encouraging every one to greater effort in helping to make each meeting a success.

After the reading of this paper, Dr. Sam G. Kelley, councilor for this district, being present, gave a very interesting talk encouraging us in what had been done and suggesting some new ideas in making our meetings profitable and developing greater interest in regular attendance by every member of the society. On his suggestion to hold meetings oftener in the warm weather, a meeting was called for June 25, to be held in Cole Camp, 3 to 6 p. m., with an open session in the evening for the benefit of the public. The secretary was instructed to correspond with the secretary of the State Association and ascertain whom we may have from the association to help us.

Dr. Marion Dillon offered a paper for the next meeting, subject "The Care of the Child during and after the Delivery." Dr. J. P. Van Allen also promised us a paper for that meeting, and it was suggested that Dr. W. G. Jones of Lincoln read the one he had prepared for this meeting but failed to present on account of pressure of business preventing his attendance.

Those present were: Dr. E. H. Gist, Frisco; Dr. J. P. Van Allen, Cole Camp; Dr. E. L. Rhodes, Lincoln; Dr. S. G. Kelley, Sedalia, and Drs. Haynes, Dillon and Smith, Warsaw. J. R. SMITH, M.D., Secretary.

DUNKLIN COUNTY MEDICAL SOCIETY

The Dunklin County Medical Society held its regular meeting April 7, at Kennett in the Commercial Club Rooms. The meeting was called to order by the president, Dr. G. W. Presnell.

Dr. George W. Cale of St. Louis was a guest of the society and read a paper on "The Use of Plates and Nails in Treatment of Fractures." This paper was illustrated by numerous Roentgen-ray photographs, and was very interesting and instructive to the members.

Dr. E. J. Goodwin, secretary of the State Medical Association, was also a guest of the society and gave an address on "The Objects and Purposes of the Organization and the Importance of the County Society." He pointed out the means and methods by which the county societies could improve the standard of practice in the county and enlarge the usefulness of the members, both as practitioners and as citizens.

Mr. Thomas R. R. Ely, former state senator, was also a guest and gave the members an interesting talk on "Medical Legislation."

A communication from Dr. E. S. Smith of Macon, regarding expert testimony, was read but no action taken.

The matter of dealing with illegal and quack practitioners was discussed, and laid over for further consideration.

This was a most interesting and enthusiastic meeting. After the formal session adjourned the members and guests were entertained at luncheon.

The following were present: Drs. G. W. Presnell, W. L. Gossage, T. J. Rigdon, T. H. Egbert, W. G. Hughes, J. D. Hess, R. E. Martin, A. S. Harrison, E. F. Harrison, A. T. Chatham, F. W. Speidel, W. E. Handley, P. J. Keislin, J. J. Drace, Paul Baldwin, C. C. Drace and U. A. V. Presnell, E. J. Goodwin of St. Louis, and Senator T. R. R. Ely.

T. J. RIGDON, M.D., Secretary.

GREENE COUNTY MEDICAL SOCIETY

On April 10, the Greene County Medical Society was called to order in regular session by the president, Dr. G. B. Lemmon.

Dr. H. C. Shuttee of West Plains was a guest of the society, and read a paper on "Sprains." Notwithstanding the stormy night a fairly good number was present and they enjoyed the paper very much, which was evidenced by the free discussion.

The Greene County Medical Society is in a very flourishing condition under the efficient presidency of Dr. G. B. Lemmon. The membership has passed the seventy-five mark, thus entitling us to two delegates at the state meeting. Dr. F. B. Fuson and Dr. W. P. Patterson are the delegates this year.

MEETING OF APRIL 28

The program was a symposium on "Inflammatory Conditions of the Female Pelvis." Dr. J. C. Matthews read a paper presenting the medical aspects, and Dr. C. W. Russell presented the surgical side of the disease.

MEETING OF MAY 8

Dr. H. S. Crossen of St. Louis was a guest of the society at this meeting and delivered an interesting address, illustrated with lantern slides, on "The Medical and Surgical Treatment of Severe Prolapsus Uteri."

There were thirty-eight members present at this meeting besides twelve visiting physicians.

It is needless to say that these meetings have been of great good to the society. Most of the members are enthusiastic over the work and speak about the excellent meetings. We trust the enthusiasm will continue.

T. O. KLINGNER, M.D., Secretary.

HARRISON COUNTY MEDICAL SOCIETY

The Harrison County Medical Society met in Bethany, May 1, 1914.

Dr. E. H. Bryson, of Bethany, was chosen as our delegate to the meeting in Joplin, May 12, 13, 14.

Dr. Hinkle (dentist) demonstrated the use of his machine for vaporizing ether and chloroform in giving anesthetics. His talk on anesthetics was of interest to the society.

The following officers were elected: Dr. L. R. Webb, president, Bethany; Dr. Lake Brewer, vice-president, Ridgeway; Dr. W. Worth Vandivert, secretary-treasurer, Bethany.

The society voted to meet in Ridgeway, June 24.

W. WORTH VANDIVERT, M.D., Secretary.

HICKORY COUNTY MEDICAL SOCIETY

The Hickory County Medical Society met in regular session at the court house in Hermitage, May 5, 1914, with the following members present: Dr. H. C. Brookshire, of Hermitage; Dr. J. W. Clark and Dr. Simons, of Cross Timbers; Dr. W. U. Hodges, of Weaubleau; Dr. R. C. Nevins, Wheatland. The meeting was called to order by the president, Dr. H. C. Brookshire.

The minutes of the previous meeting were read and approved.

Dr. Wallace Simonds, of Cross Timbers, was elected a member of our society.

Several interesting cases were reported, among which was a case of placenta praevia by Dr. Hodges, of Weaubleau, and a case of cerebral embolism, by Dr. J. W. Clark, of Cross Timbers.

The society adjourned to meet in Wheatland, July 7, 1914, at 1 o'clock p. m.

R. C. NEVINS, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at Fayette, Friday, May 1, at 2 p. m., with the president, Dr. T. J. Payne, in the chair. Members present: Drs. Kitchen, Temple and Pritchett, of Glasgow; Dr. J. T. Wood, of Harrisburg; Drs. Bonham, Lewis, Lee, Moore and Watts, of Fayette.

The minutes of the April meeting were read and approved. No clinical cases were presented. The reading of papers was dispensed with in order to hear Dr. Pritchett, of Glasgow, on "Tuberculosis," and the great importance of educating the laity to be wide-awake on this all-important subject. Most of the members present took part in the discussion.

Drs. Temple and Pritchett, our delegates to Missouri State Medical Association, were present and warmly greeted.

The secretary read several letters from state officers and urged a good attendance. There was a larger attendance and a greater interest shown by the members than at any former meeting this year.

C. W. WATTS, M.D., Secretary.

JACKSON COUNTY MEDICAL SOCIETY

On April 28, Dr. William Frick presented the method of "Treating Skin Blemishes" and Dr. E. G. Blair, "Dachtylo-Costal Cartilaginous and Osseous Rhinoplasty."

On May 5, Dr. M. T. Sudler, dean of the University of Kansas, presented the subject of "Local Anesthesia." Dr. H. C. Anderson a discussion of "Contra-Indications to General Anesthesia" and E. H. Skinner presented a paper on "Intensive Roentgen Therapy."

On May 12 there was no meeting due to the annual meeting of the Missouri State Medical Association, which was in session at Joplin.

On May 19, Dr. Frederick Lowe presented the subject of "Angioneurotic Edema" and Dr. B. A. Poorman, "Empyema with Demonstrations of Cases."

On May 26 will be held the last meeting before the summer vacation. This meeting is to be given over entirely to the presentation of clinical cases and specimens.

The members of the society who presented "The Doctor's Dilemma," by Bernard Shaw, on the night of April 22, gave the same presentation before the Missouri State Medical Association on May 13, in the new Joplin Theater.

During the week of May 11 "Damaged Goods," a play which has for its theme the subject of syphilis, was presented at the Shubert Theater. A committee was appointed by the president to investigate the lines of the drama and to recommend this production to the public as an influence for good.

EDWIN H. SCHORER, M.D.

KNOX COUNTY MEDICAL SOCIETY

The Knox County Medical Society met on April 24 pursuant to a call from the councillor of this, the sixth district.

Dr. A. C. Crank, councillor, accompanied by our most efficient secretary of the State Association, arrived in Edina on the morning of the 24th, being met at the station by a delegation of members of the local society.

The attendance was very good and many of the members from the country were present.

The meeting was called to order by Dr. Geo. Brown, the newly-elected president, at 2 p. m., in the parlor of the Gibbons Hotel, and Dr. E. J. Goodwin, secretary of the State Association, was introduced and called on to address the society.

The state secretary, in a few happy words, made known his mission to Edina and at once delved into the intricacies of organization work with its attending difficulties.

Especial stress was laid on the necessity of thoroughness in the examination of candidates for membership in the society; the value of individual endeavor of all the members in little as well as in big things was forcibly brought home by reciting the acts of members bearing on legislative matters, calling particular attention to optometry, Christian Science, chiropractors and other fads.

The necessity of supporting the *STATE JOURNAL* was touched on and a request made, all other things being equal, to patronize those firms who advertise in *THE JOURNAL*.

Dr. A. C. Crank, of Canton, councillor of the Sixth district, addressed the society on the necessity of cooperation of the members, advising that petty jealousies be done away with and work which can just as well be done at home be kept there.

He recommended the holding of monthly meetings and the bringing of clinics as well as papers. Dr. Crank in his first visit to Knox County made a very favorable impression on all the members, and no doubt under his efficient aid the society will flourish and accomplish more than it has ever done before.

Members present were: Drs. Geo. S. Brown, H. H. St. John, James Keaney, H. J. Jurgens, of Edina; J. R. Northcutt, of Knox City; F. E. Luman, of Baring, A. D. Gray, of Hurdland.

Dr. A. D. Gray brought a very interesting case for examination and study, a tentative diagnosis of Jacksonian epilepsy being made.

A suggestion made by the councillor and very favorably received pertaining to the exchange of essayists of the component county societies of the sixth district, was thoroughly discussed and a promise made by the councillor that he would take up the matter with the other societies.

Dr. E. H. Bullock, of Edina, presented his application for membership, and in a few well-chosen words extolled the many advantages to be derived from organization and cooperation as bearing on mutual content and financial benefit.

Taking all in all, this was the most successful meeting in the history of the society. A vote of thanks was extended to both Drs. Goodwin and Crank, and the meeting adjourned until the first Tuesday in June.

H. J. JURGENS, M.D., Secretary.

PIKE COUNTY MEDICAL SOCIETY

The regular meeting of the Pike County Medical Society was held in Louisiana, May 4, First Vice-President Dr. T. G. Hetherlin presiding. The following members were present: Drs. C. L. Bankhead, D. M. Pearson, R. J. Guy, C. E. Gibbs, J. W. Dreyfus, C. P. Lewellen, W. R. Hardin, T. G. Hetherlin, F. V. Keeling.

Dr. C. L. Bankhead presented a case of necrosis of the fibula for examination.

Dr. C. E. Gibbs read a very interesting paper on "Goiter," which was followed by a general discussion.

Dr. J. W. Dreyfus read a paper that was interesting and entertaining to all present. His subject was "Psychologic Factors in Disease."

Dr. T. G. Hetherlin presented a case of "Lupus Erythematosus" for inspection and diagnosis.

Drs. J. W. Dreyfus, W. R. Hardin and T. G. Hetherlin were appointed a committee to draft resolutions of condolence to the family of Dr. Ayres, recently deceased, and a copy was ordered spread on the minutes of the society.

Paynesville was chosen as the next place of meeting, on June 1, 1914, with following program: Papers by Dr. D. M. Pearson, C. L. Bankhead, J. E. Bankhead and E. M. Bartlett.

F. V. KEELING, M.D., Secretary.

RALLS COUNTY MEDICAL SOCIETY

The Ralls County Medical Society met in regular session at New London, April 23, 1914. The president, Dr. W. T. Waters, presided. Drs. Richard Schmidt, W. H. Hays and E. H. Bounds, of Hannibal; Dr. J. J. Kennedy, of Frankford; Dr. H. B. Norton, of Center, and Drs. W. T. Waters and T. J. Downing, of New London, present.

Dr. J. J. Kennedy read a very interesting paper on infantile diarrhea. He laid particular stress upon non-resistance, infection, faulty reconstruction of protein compounds, and heat as causative factors. The discussion was most interesting, all taking part.

Dr. E. H. Bounds presented a report of five cases of intussusception in children; three of the cases occurred in practice, one in W. H. Hay's practice, and one in Dr. J. N. Baskett's practice. All were operated and four recovered. He emphasized the importance of early diagnosis and early operation. The city of Hannibal and country tributary to it has about 35,000 inhabitants. These five cases were spread over about five years, and Dr. Bounds expressed the belief that some cases of intussusception were overlooked during this stretch of five years.

We had a good time.

T. J. DOWNING, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at Dr. Justice's office, Lancaster, April 21, 1914.

The meeting was called to order by Dr. W. A. Potter, vice-president, Dr. W. H. Zeiber, president, coming in later.

Members present: Drs. W. F. Justice, B. B. Potter, W. A. Potter, of Lancaster; Dr. W. H. Zeiber, of Queen City; Dr. J. H. Keller, of Glenwood; Drs. H. E. Gerwig and J. B. Bridges, of Downing, and Dr. E. E. Heaton of Centerville, Ia.

A communication from the North Missouri Medical Association was read, asking our society to instruct our delegate to the state meeting to consider favorably the resolution adopted by the North Missouri Medical Association regarding expert testimony. On motion the delegate was so instructed.

The matter of a public meeting was discussed, and by motion it was determined to have one some time during the summer, the exact date to be determined at our next meeting, June 30.

The program consisted of a paper by Dr. E. E. Heaton, of Centerville, Ia., on cholelithiasis. It was a very interesting paper and was discussed at length.

The meeting adjourned to meet June 30.

J. B. BRIDGES, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held in the grill-room at the St. Francis Hotel, Wednesday evening, May 6. Sixty-one members were present.

A very enthusiastic attendance greeted Dr. Bransford Lewis, of St. Louis, at this meeting, which was our annual sociability dinner. The subject of Dr. Lewis' paper was a review, "The Genito-Urinary Diagnosis, Pathology and Therapy," illustrated with lantern slides.

After the reading of the paper the society held a meeting at which the following business was transacted:

The minutes of the previous meeting were read and approved.

The secretary was instructed to obtain a letter from the Commerce Club inviting the Missouri State Medical Association to hold their annual meeting for 1915 in St. Joseph.

The Public Health and Legislation Committee requested further time in connection with the various changes which they have under consideration.

The application of Dr. O. A. Schmid, having been regularly endorsed by the Board of Censors and received its second reading, was voted on, and the doctor unanimously elected a member of this society. The application of Dr. Frederick Eliseu, of St. Joseph, for membership in this society received its first reading.

The president appointed a committee of twenty members to meet in a body and call upon our city council Wednesday afternoon, May 13, at 4 o'clock, for the purpose of urging on them the importance of providing necessary funds to properly maintain and continue the office of city pathologist.

W. F. GOETZE, M.D., Secretary.

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, May 20, Vice-President Dr. F. H. Ladd in the chair. Thirty-three members present.

The application of Dr. Fred Eliseu for membership in this society having received the endorsement of the censors and its second reading was balloted on and the doctor duly elected to membership.

The following report was handed in by the committee on public health and legislation:

Having been instructed by your society at a previous meeting to investigate and report the condition of affairs of the Neal Institute, an institution for the treatment of the drug and liquor habits, we, your committee, visited this institution in person and from our investigation and from other sources believe said institution to be unethical and practicing medicine contrary to the laws of this state. We also found that the worst feature of this institution is that it is being supported by some of the members of this society. According to the statement of the manager of this institution, he has made it a practice to call in various doctors of this society to examine patients in his institution. This committee recommends that necessary measures be taken to eradicate this institution from our city.

(Signed) Dr. F. H. LADD,

Dr. A. E. HOLLEY.

On motion of Dr. Holley, seconded by Dr. Ladd, notice is to be printed in our next *Bulletin*, advising the action of this society regarding the Neal Institute.

Dr. L. A. Todd, state counselor, gave a detailed report of the proceedings of the Judicial council and among other matters reported to this society the action of the judicial council on our petition to have the name of this society changed to that of the "Buchanan County Medical Society." Dr. Todd reported a reluctance on the part of the judicial council to grant this permission until our counselor had succeeded in organizing the Andrew County doctors into a separate county organization. Dr. Todd's report was supplemented by Dr. Daniel Morton, a member of the House of Delegates. Dr. Morton reported that his understanding was that if an attempt was made to organize Andrew County into a separate organization, the executive committee of the judicial council would be inclined to grant our petition whether the attempt was successful or not. After considerable discussion the following members of this society were named to aid Dr. Todd in perfecting the Andrew County organization: Drs. Martin, Jeffries, Morton, Woodson and Holley, their report to be submitted at our next meeting.

The society also listened to the report of Drs. Morton, Woodson and Gregory, all of whom had attended the meeting of the State Medical Association at Joplin.

On motion of Dr. Elam, seconded by Dr. Woodson, a vote of thanks was tendered our delegates and counselor for their active and efficient work at the state meeting. Carried.

The society also tendered Dr. C. R. Woodson a vote of thanks for his invitation to meet at the Woodson Sanitarium for our first meeting in September.

The secretary was instructed to telephone the committee of twenty to meet and call on the city council at their next meeting for the purpose of urging on them the importance of providing necessary funds to properly maintain and continue the office of city pathologist.

W. F. GOETZE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SODIUM BIPHOSPHATE, SQUIBB.—This non-proprietary form of sodium acid phosphate has been accepted for inclusion with New and Nonofficial Remedies. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, May 2, 1914, p. 1401).

NORMAL HORSE SERUM WITH CHLOROFORM AS A PRESERVATIVE.—Marketed in vials, each containing 50 c.c. H. M. Alexander & Co., Marietta, Pa.

NORMAL HORSE SERUM WITHOUT PRESERVATIVE.—Marketed in vials, each containing 50 c.c. H. M. Alexander & Co., Marietta, Pa. (*Jour. A. M. A.*, May 2, 1914, p. 1401).

EREPTON.—A meat product consisting largely of the amino-acids produced by the digestion of meat. Erepton is said to be useful in cases in which it is necessary to substitute a perfectly digested food for the product of natural digestion in cases of gastric or intestinal indigestion and for the purposes of rectal alimentation. Farbwerke Hoechst Co., New York (*Jour. A. M. A.*, May 16, 1914, p. 1559).

ACNE SEROBACTERIN, MULFORD.—This is a sensitized acne vaccine. H. K. Mulford Co., Philadelphia, Pa.

COLI SEROBACTERIN, MULFORD.—This is a sensitized coli vaccine. H. K. Mulford Co., Philadelphia, Pa.

NEISSER SEROBACTERIN, MULFORD.—This is a sensitized gonococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

PNEUMO SEROBACTERIN, MULFORD.—This is a sensitized pneumococcic vaccine. H. K. Mulford Co., Philadelphia, Pa.

STAPHYLO ACNE SEROBACTERIN, MULFORD.—This is a sensitized staphylo acne vaccine. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, May 16, 1914, p. 1559).

NEW BORNYVAL.—New bornyval is borneol isovaleryl glycolate, the isovaleryl glycolic acid ester of borneol. Being more resistant to the gastric fluids than bornyval, it passes the stomach unchanged and is said therefore to be less irritating than bornyval. Its properties are similar to those of bornyval and other valerian preparations. New bornyval is an almost tasteless and odorless liquid, insoluble in water. It is sold also in the form of Bornyval Pearls, each containing 4 minims of New Bornyval. Riedel & Co., New York (*Jour. A. M. A.*, May 23, 1914, p. 1637).

PROPAGANDA FOR REFORM

VALENTINE'S MEAT JUICE.—Four years ago an examination by the Council on Pharmacy and Chemistry showed that Valentine's Meat Juice was not a meat juice, but had the character of a meat extract instead, while on the basis of the claim that it was a meat juice extravagant assertions as to its nutritive value were made. The product being a meat extract was practically devoid of nutrient qualities. As Valentine's Meat Juice is still widely advertised the Council deemed a reexamination important. This reexamination shows that in general it has the composition now as then, and that the same unwarranted claims are still made for it (*Jour. A. M. A.*, May 2, 1914, p. 1419).

LOWER'S GERMEN PRESCRIPTION.—This "consumption cure," hailing from Marion, Ohio, is sold under the claims: "The most Deadly Foe to the Great White Plague—TUBERCULOSIS—Science Has Yet Produced," "it takes from fifteen to thirty large bottles of Germen Prescription to remove the tuberculosis poison," each bottle costing the victim two dollars. The composition of the nostrum is purported to be (in bastard Latin): "Herb Menthaepeperitae, Herb Marrubium Vulgarae, Ex balsanum Tolutonum, Herb Hydrastis Canadensis, Scillae Maratinia, Mentholis, Ex Virginiana Prunus, Ex Capsici Fastigiatum." An examination made in the A. M. A. Chemical Laboratory indicates that whatever therapeutic virtues this peppermint-horehound-cayenne pepper-menthol mixture possesses are due to the 1.83 gm. menthol per 100 c.c. which it contained. About the only effect produced by the mixture will be to derange the digestion of the person taking it (*Jour. A. M. A.*, May 2, 1914, p. 1418).

PITUITARY EXTRACT.—The use of pituitary extract as an oxytocic must be considered in the experimental stage. A large number of cases have been reported in which untoward effects from the use of various pituitary extracts (including pituitrin) were obtained (*Jour. A. M. A.*, May 2, 1914, p. 1420).

PANCREATIN.—Long and Buhleman report that mere traces of hydrochloric acid will destroy the ptyalin of pancreatin, that pancreatin of commerce—which often is not pancreatin but merely the dried pancreas gland—is practically devoid of lipase, the fat digesting ferment, and that its tryptic ferment is likely to be destroyed by the action of the pepsin and hydrochloric acid during its passage through the stomach (*Arch. Int. Med.*, Feb. 1914, p. 314).

THE OKOLA LABORATORY.—The postmaster general has issued a fraud order against the Okola Laboratory, Inc., Rochester, N. Y., which sold a mail-order treatment for weak eyes. The "laboratory" advertised that Dr. John L. Corish, "an able New York physician" and "an eminent medical man," had discovered a marvelous treatment for affections of the eye by which those who were wearing glasses or who should have been wearing glasses would do without them. The treatment consisted of three parts. Okola was the name of some tablets proven by the government to consist of baking soda and boric acid. The Okolator was a metal inhaler containing cotton moistened with a volatile liquid. The Okolizers were printed cards giving instructions for rubbing the eyes, etc. (*Jour. A. M. A.*, May 9, 1914, p. 1492).

PA-PAY-ANS (BELL) NOW BELL-ANS.—Bell & Company announce that Pa-pay-ans (Bell) is in the future to be known as Bell-ans. An examination of Pa-pay-ans (Bell) made by the Council on Pharmacy and Chemistry having failed to demonstrate the presence of papain, it is probable that the change of name was decided on to escape prosecution for misbranding (*Jour. A. M. A.*, May 9, 1914, p. 1492).

BROMIDIA (BATTLE AND Co.).—A report of the Council on Pharmacy and Chemistry points out that

while the name suggests bromid, Bromidia is essentially a chloral preparation. This nostrum illustrates the need of the Council's rule under which recognition is refused to pharmaceutical mixtures whose name does not indicate their most potent ingredients. While the chloral content of Bromidia has been given considerable publicity, yet the preparation is used both by physicians and by the public, without due consideration of its ingredient, as attested by the fatal results and the habit-formation which have resulted from its use. The Bromidia advertising propaganda first admits the presence of chloral, then it is argued that in Bromidia the evil effects of chloral are eliminated and in the end the impression is left that Bromidia is practically innocuous and may be given even in cases of typhoid and to children (*Jour. A. M. A.*, May 16, 1914, p. 1573).

MONTE CHRISTO RUM AND QUININ FOR THE HAIR.—The government chemists found this preparation to contain ethyl alcohol, wood alcohol and a trace of quinin. The manufacturers were found guilty of adulteration and misbranding the preparation (*Jour. A. M. A.*, May 16, 1914, p. 1575).

PEPSIN MAGEN BITTERS.—The government chemists found this preparation to contain only a trace of pepsin. The preparation was declared misbranded (*Jour. A. M. A.*, May 16, 1914, p. 1575).

BAVARIAN MALT EXTRACT.—The government chemists proved that this was not a malt extract coming from Bavaria, but instead was beer. The product was declared misbranded (*Jour. A. M. A.*, May 16, 1914, p. 1575).

THIOLIN READMITTED TO N. N. R.—In 1913 the Council on Pharmacy and Chemistry directed the deletion from New and Nonofficial Remedies of Thiocol and Syrup Thiocol, Roche, because a preparation called Sirolin, containing Thiocol as its effective component and practically the same as Syrup Thiocol, Roche, was being advertised to the public. The Hoffmann-LaRoche Chemical Works having furnished assurance that the public exploitation of Sirolin has been discontinued, the Council voted that Thiocol and Syrup Thiocol, Roche, be restored to New and Nonofficial Remedies (*Jour. A. M. A.*, May 23, 1914, p. 1637).

ANTIMENINGITIS SERUM.—The untoward or fatal effects sometimes following the use of antimeningitis serum are probably due to the toxic action of the preservative contained in it or to increased intracranial tension due to its administration. The technique of its employment should be improved rather than its use abandoned. The dangers which may arise from its use are not to be feared as much as the disease itself (*Jour. A. M. A.*, May 23, 1914, p. 1661).

LIQUID PETROLATUM OR "RUSSIAN MINERAL OIL."—A report of the Council on Pharmacy and Chemistry points out that petroleum oil was used as a medicine by the ancients and that the product "liquid petrolatum" is now on the market under a host of proprietary names and is official in most pharmacopoeias. It was at one time used in the treatment of tuberculosis and as an adulterant of fats and oils on the assumption that it was assimilable. It is now known to pass the system unchanged and has recently been highly lauded as a particularly harmless laxative in the treatment of habitual constipation. As the U. S. P. definition of liquid petrolatum permits the use of rather widely varying products and as there is some difference of opinion whether a light or a heavy oil is preferable, the Council recommends that physicians desiring the water white, non-fluorescent (Russian) mineral oil use the term *petrolatum liquidum* grave or *paraffinum liquidum*, B. P. if the heavy product preferred by Sir F. Arbuthnot Lane is desired and *petrolatum liquidum laeve* if the light variety is desired (*Jour. A. M. A.*, May 30, 1914, p. 1740).

CIRKULON.—The device "Pulsocon" which Gerald Macaura has exploited widely in England, is sold in this country as "Cirkulon" by the "Cirkulon Institute" of Kansas City, Mo. Gerald Macaura, according to the Associated Press, has been sentenced in France to serve a term of three years' imprisonment on a charge of fraud (*Jour. A. M. A.*, May 30, 1914, p. 1742).

BOOK REVIEWS

TEXT-BOOK OF DISEASES OF THE NOSE, THROAT AND EAR. For the Use of Students and General Practitioners. By Francis R. Packard, M.D., Professor of Diseases of the Nose and Throat in the Philadelphia Polyclinic Hospital and College for Graduates in Medicine. Second Edition. Cloth. Price, \$3.50. Pp. 377, with 145 illustrations. Philadelphia: J. B. Lippincott Company, 1913.

The author does not make any extravagant claims for this book. His purpose was to furnish a hand-book for under-graduates and general practitioners, and it may serve such a purpose. He has, however, treated his subjects too briefly, even for the class he addresses.

It is regrettable that formulas containing proprietary remedies find a place in the book.

RADIUM THERAPEUTICS. By N. S. Finzi, London. Henry Frowde, Oxford University Press. American Branch, New York, 1913. Price, \$2.

A useful monograph for the physician who wants to know what has been done with radium. The book is well written, well gotten up and printed, and well worth reading.

TREATISE ON DISEASES OF THE SKIN FOR THE USE OF ADVANCED STUDENTS AND PRACTITIONERS. By Henry W. Stelwagon, M.D., Ph.D. Seventh edition, thoroughly revised, with 334 illustrations in the text and 33 full-page colored and half-tone plates. Octavo of 1,250 pages. W. B. Saunders Company, Philadelphia and London, 1914.

Among American cities, Philadelphia has long held an enviable position as a medical center whose annals are adorned by a long list of illustrious names. Among the factors contributing to her scientific position the Philadelphia School of Dermatology has won an unquestioned place. The names of Dühring, his pupils Van Harlingen, Stelwagon, Hartzell and Sehamberg, with those of the younger men, such as Knowles, furnish a sort of apostolic succession teaching a dermatologic doctrine as sound now as at first despite its far-reaching developments.

Since the death of the lamented Dühring, the place of *primus inter pares* has been taken by Dr. Stelwagon. Although it is thirty years since he began to be known to readers of dermatologic literature, he is to-day among the most active workers in his branch with the promise of many years of continued industry and productiveness, so that the appearance of a new edition of his treatise, the seventh in twelve years, besides four reprints, at once arouses the interest of his confrères.

Among the large number of excellent treatises and hand-books published by American dermatologists, that of Dühring for many years easily held the first place. That position is now again as securely held by another Philadelphia book. While the general practitioner finds this to be a practical and helpful work, the specialist prizes it not only because it contains the mature judgment of a master, but because the author's untiring industry has collected a rich bibliography in the way of full references to almost every original article worth consulting on the subject which has appeared in the last forty years, besides many older titles. The

numerous half-tones and colored plates thoroughly illustrate the subject and are a great help, especially to the reader who has not enjoyed a special training in dermatology. About forty cuts appear in this edition for the first time, comprising such subjects as syphilis, leprosy, prurigo nodularis, lupus vulgaris, Oriental sore, dermatitis vegetans, the ring type of impetigo contagiosa and cultures of ring-worm fungi. Among titles absent from former editions are prurigo nodularis, granuloma pyogenicum, benign sarcoid and keratosis bleomorrhagica, while the newer knowledge of syphilis, leprosy, pellagra, sporotrichosis, ringworm and the tropical affections find full presentation. The sections on therapy are very full and rich in suggestion.

The seeker for help in diagnosis or treatment, if only he be possessed of that knowledge of the rudiments of the subject without which books are useless, will rarely close his "Stelwagon" in disappointment.

CASE HISTORIES IN PEDIATRICS. A Collection of Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Diseases of Infancy and Childhood, with an Introductory Section on the Normal Development and Physical Examination of Infants and Children. By John Levitt Morse, A.M., M.D., Associate Professor of Pediatrics, Harvard Medical School; Associate Visiting Physician at the Infants' Hospital and at the Children's Hospital, Boston. Second Edition. Boston: W. M. Leonard, Publisher, 1913.

This second edition of Morse's classical work will be received with thankful appreciation by the members of the profession who are interested in pediatrics. For every teacher it is invaluable and for the isolated practitioner who has not the opportunity of going up to the great centers of postgraduate teaching it is a gold mine. Not only does it give the best concrete example of the scientist's differential diagnosis, but all the newest arts which the clinical laboratories have made available in the clinical investigation of disease, thus keeping the country practitioner abreast of the times in the most effectual manner. Every one who has practiced long and had many difficult cases referred to him will agree that it is an astounding fact that diseases which were more or less rare in the experience of the average practitioner generally escape diagnosis in spite of the fact that they are fully described in all the text-books. The case-history method will eradicate this great evil in so far as men will attain the information in a given case from this source. Take Banti's disease, for instance, on page 491. No practitioner who reads this page would ever be caught napping if confronted with a similar case in practice. The pages from 1 to 62 contain a large amount of most valuable and well-condensed information of general application. This book is a real necessity and not a luxury.

If the author is open to suggestions, it might be well to remind him that an appendix on treatment, after the manner so popular with our English brethren, especially for the last generation, would not only enhance the value of the work but would be the means of greatly enlarging its scope of usefulness, as it is impossible for all the diseases known and described to appear in a cardinal rôle in a work of this kind. The man who can afford to buy but few books always has an eye to the time when he must rush to his shelves for the solution of a burning problem, and he wants to have each work as complete as possible on the subject of which it treats. Dr. Morse could add a hundred pages to the next edition—therapeutic practice, favorite prescriptions and curt suggestions on the most modern treatment of every disease occurring in general practice in North America—which would add immensely to the scope of the work. The perplexed physician would thus always be sure of getting something in the treatment of the case, even though he could find nothing bearing on that particular difficulty in the case histories given.

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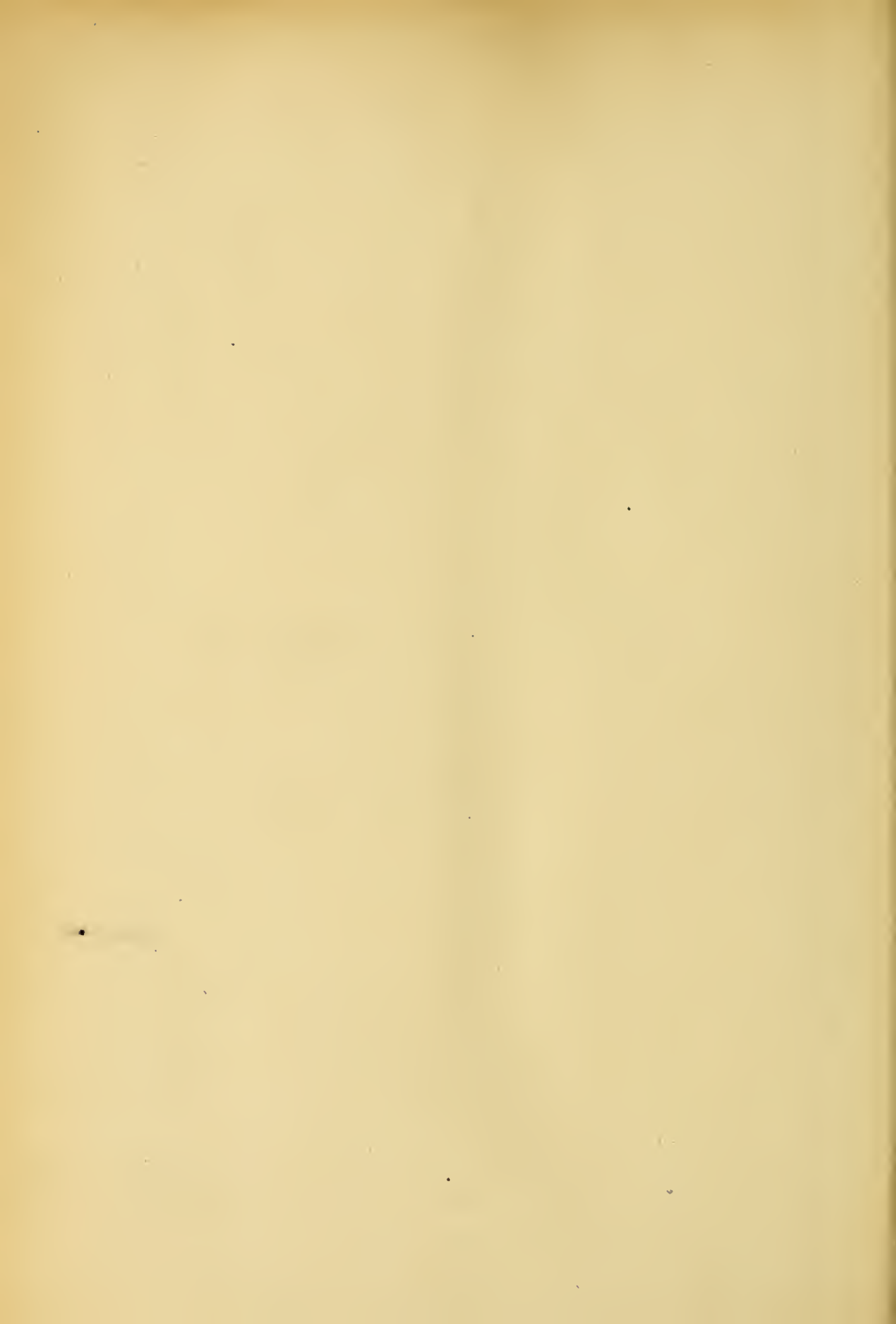
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